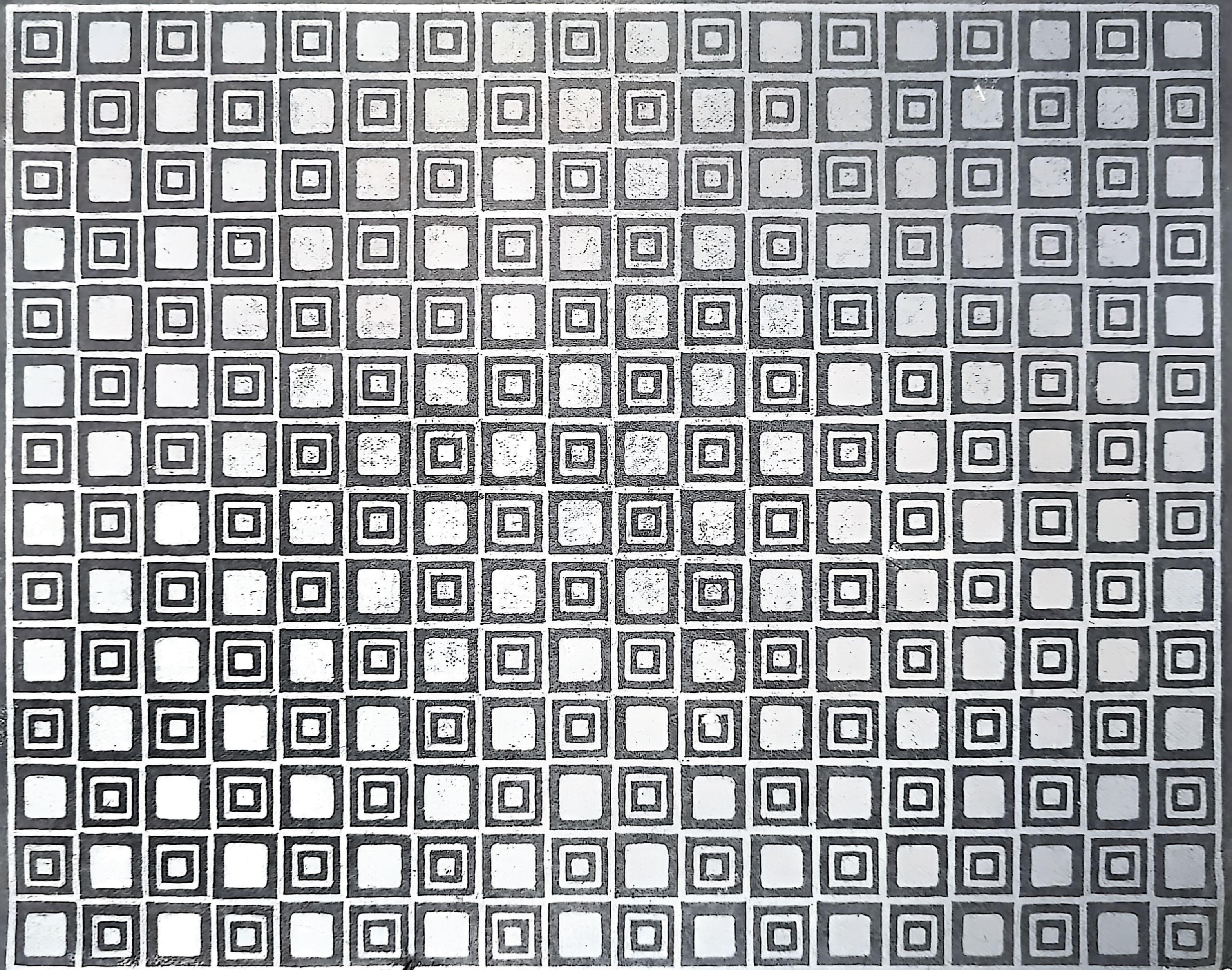
INDUSTRIAL ART TEXT BOOKS

BONNIE E. SNOW · HUGO B. FROEHLICH

PART EIGHT



THESE "INDUSTRIAL ART TEXT BOOKS" ARE BASED UPON A NEW AND SIGNIFICANT THEORY OF ART - THE THEORY THAT "REPRESENTATION" IS NOT A BASIC OR FUNDAMENTAL ART PRINCIPLE. ABILITY TO DRAW IS IMPORTANT AS A MEANS TO AN END; IT SHOULD NOT BE CONSIDERED AS AN END IN ITSELF.

PUBLIC SCHOOL ART COURSES EXIST NOT FOR THE PURPOSE OF TRAINING CHILDREN TO MAKE PICTURES. PICTURE-MAKING BELONGS TO THE SPECIALIZED PROFESSIONS OR VOCATIONS WHICH ARE FOLLOWED BY PAINTERS, ILLUSTRATORS, SCULPTORS, ETC. THESE ARE LEGITIMATE AND HONORABLE LINES, BUT ARE OPEN ONLY TO THE COMPARATIVELY FEW, ESPECIALLY GIFTED BY NATURE FOR SUCH WORK. THE AVERAGE MAN NEEDS TO KNOW HOW TO FURNISH HIS HOUSE, HOW TO CHOOSE HIS CLOTHING, HOW TO ARRANGE HIS BUSINESS ADVERTISEMENTS. THROUGH THESE CHOICES HE CONSTANTLY CULTIVATES HIS TASTE, AND DEVELOPS A GENERAL APPRECIATION OF THE MOST SUITABLE, THE MOST USEFUL AND THEREFORE THE MOST BEAUTIFUL. THERE IS NO REASON WHY THIS APPRECIATION SHOULD NOT INCLUDE PICTURES AND SCULPTURE, THE SO-CALLED FINE ARTS.

THESE "INDUSTRIAL ART TEXT BOOKS" BEGIN WITH ARRANGEMENTS OF COLORS AND SHAPES. REPRESENTATION FINDS ITS PLACE, AS ABILITY TO DRAW BECOMES NECESSARY TO SELF-EXPRESSION. DRAWING IS NOT SLIGHTED IN THIS SERIES OF BOOKS. IT IS GIVEN ITS RIGHTFUL PLACE AS THE INSTRUMENT AND THE LANGUAGE OF ART, RATHER THAN THE HIGHEST PLACE BELONGING TO ART ITSELF.

INDUSTRIAL ART TEXT BOOKS

A·GRADED·COURSE·IN·ART·IN ITS·RELATION·TO·INDUSTRY

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GEORGE W. KOCH

·PART·EIGHT·

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From the pupils of Caroline Sheldon, South Side High School, Newark, N. J.

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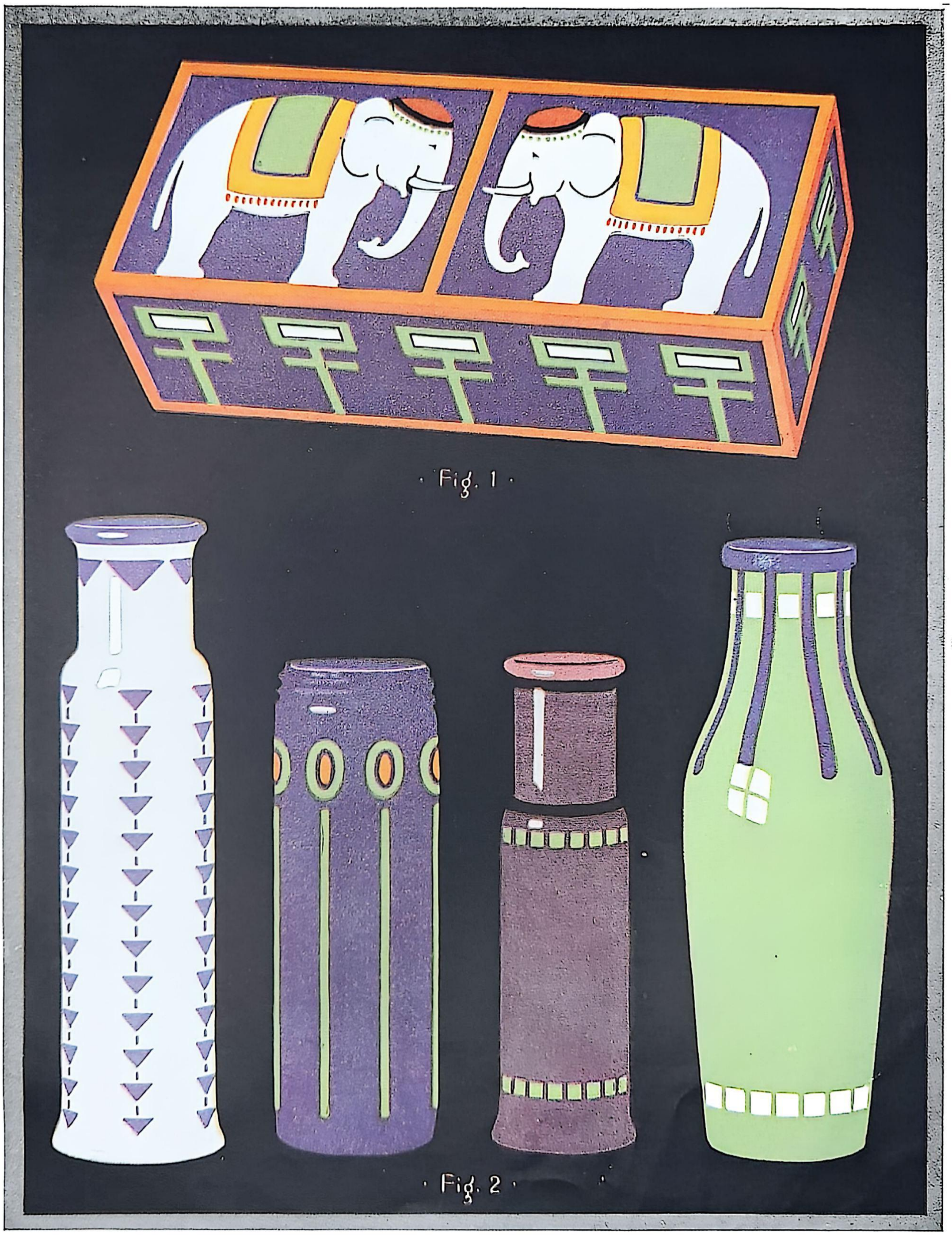
Designs Expressed in Appliqué Embroidery



· Fig. 1 ·

· Fig. 2 ·

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Household Objects Decorated with "Enamelac" Paints

COLOR PLATES I AND II

VARIOUS USES OF COLOR SHAPES

Color Harmonies in Useful Objects: Many people, particularly students of art, think of color theories and of color harmonies only as problems to be expressed in paint. Often in selecting colors and materials for household uses, or for personal wear, such people fail to apply what they know. Failure to put into practice what one knows casts discredit upon mere knowledge. If we never sing, nor play the piano, it would be difficult to persuade others that we understood the art of singing and playing. Of what good is an understanding of color relationships if one continues to dress in discordant or unlovely colors, and to choose furniture and decorations for the home that transgress the principles of color harmony? Our homes, our surroundings, our dress and whatever we select or buy should express us at our best.

The Round Cushion: The upper illustration on page 2 shows an interesting problem in color harmony, worked out in terms of cloth, to fit a need in the home. Blue linen, scraps of silk, satin, ribbon and sateen were the materials involved. The flower shapes in the center, after being cut out and arranged, were applied upon the background, and were further enriched with a treatment of embroidery stitches. The design was first worked out in colored papers. A round shape of approximate size and color was first cut, and upon this was placed a circular band, drawn with compasses on black paper, and cut out. On the edges of this band, a green outline was indicated with colored crayon. The desired flower shapes were then cut out and arranged upon a circle of black paper for the decoration in the center. These shapes were modified by colored crayon lines, dots, etc., to be expressed afterwards in various kinds of embroidery stitches. Vertical lines in colored crayon were added to the background, and also a marginal line of yellow. When the design was satisfactory, all the shapes were cut from cloth: blue linen for the cushion, black sateen for the band and the center, with silk, satin, chambray gingham and sateen for the flower shapes. Whatever materials best presented the desired color notes were used. The shapes were basted in place, and the edges of all shapes were either turned in and neatly hemmed to the background, or covered with a decorative stitch, worked with coarse mercerized cotton or with silk floss. Outline stitch, couching stitch, buttonhole stitch, satin stitch and French knots were all employed in working out this design.

The thickness of the cushion was obtained by the addition of a four-inch strip, or band, of blue linen, fulled on to the edges of the circular top and bottom of the cushion. The seams thus made were covered with a cord, couched on as a further decoration.

The Rectangular Pillow Top: This design was also first planned in colored papers. A light gray-orange paper was selected for the background. As a stripe design was desired, four strips of blue paper were cut. Notice that the two outer strips are slightly wider than the two inner strips. The flower shapes were then cut from paper and arranged. For the color scheme, a double complement was used: yellow-green and red-violet, blue and orange.

When carried out in materials, gray-orange cotton poplin was selected for the background. Scraps of thin silk, satin or cotton cloth were used for the flower shapes. When finished, the pillow measured 15 x 21 inches, with a distance between the blue stripes of about four inches.

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CHAPTER I

DESIGN AND COLOR

Suggestions to Teachers

The Principles of Design Already Presented: The principles of design which have already been presented in these books may be briefly reviewed, as a basis for what is to follow. An understanding of the first steps in design is most essential.

We began with the simplest form of repetition, or movement, produced by repeating a shape at regular intervals (Part One, page 9). We saw in the simple border which resulted from this process, a certain relationship between the parts. We could not remove one of the shapes without injury to the whole. We saw that the spaces created on the background were as essential to the design as the unit or shape that was repeated. This principle of relationship we call rhythm. Rhythm was briefly defined as related movement. We found that rhythm is present not only in borders and surface patterns, but in all designs where a similarity of line direction or movement is apparent, and by means of which the eye is led consistently and without interruption throughout all the parts of a composition.

In developing various exercises in rhythm, we found it necessary to consider another principle of arrangement, the principle of balance. We discovered that in all good designs there is an equalization of forces; that one part of the composition does not draw undue attention to itself, but that all parts are balanced. We found that a balanced design produced in us a feeling of satisfaction and rest. It developed in the course of our work that balance could be secured in two ways: by arranging the parts of a design in perfect symmetry, with the shapes exactly alike on each side of an axis, or by a balance of unequal shapes. The former is illustrated by the design in Fig. 1, page 3, and the latter by the design in Fig. 1, page 2, of this book.

Structural Design: We are ready now for the study of another principle—the principle of structural unity. In the exercises given in the previous books, the pupils were led to design borders and surface patterns, almost exclusively. Such designs relate to textiles and other fabrics or to the covering of a surface with an interesting arrangement of shapes and colors. Structural design deals with the *structure* of an object. A glance through the pages of this chapter will clearly illustrate the emphasis that is placed on the planning of an arrangement to fit the construction or form of the object or shape to be decorated. From the Woolworth building to the round tin box, the structure of the object has been the controlling factor in its decoration.

Structural Unity: An understanding of the principle of structural design will help us in many practical ways. If a building is to be erected whose leading lines are vertical, as in the splendid structure shown on page 8, then all the decorative features should be dominated by the vertical element. Note the proportions of the tower, of the windows, and the emphasis of the vertical movement throughout the entire construction. The building rises from the ground like a graceful lily, beautiful in proportion, massive in strength, with its decoration absolutely consistent with its structure and with its use.

The Woolworth building was designed by Cass Gilbert.

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Courtesy of the Atlantic Terra Cotta Company, New York City.

Design and Color: An Example of Structural Unity. The Woolworth building, located in New York City, is the most beautiful office building in the world.

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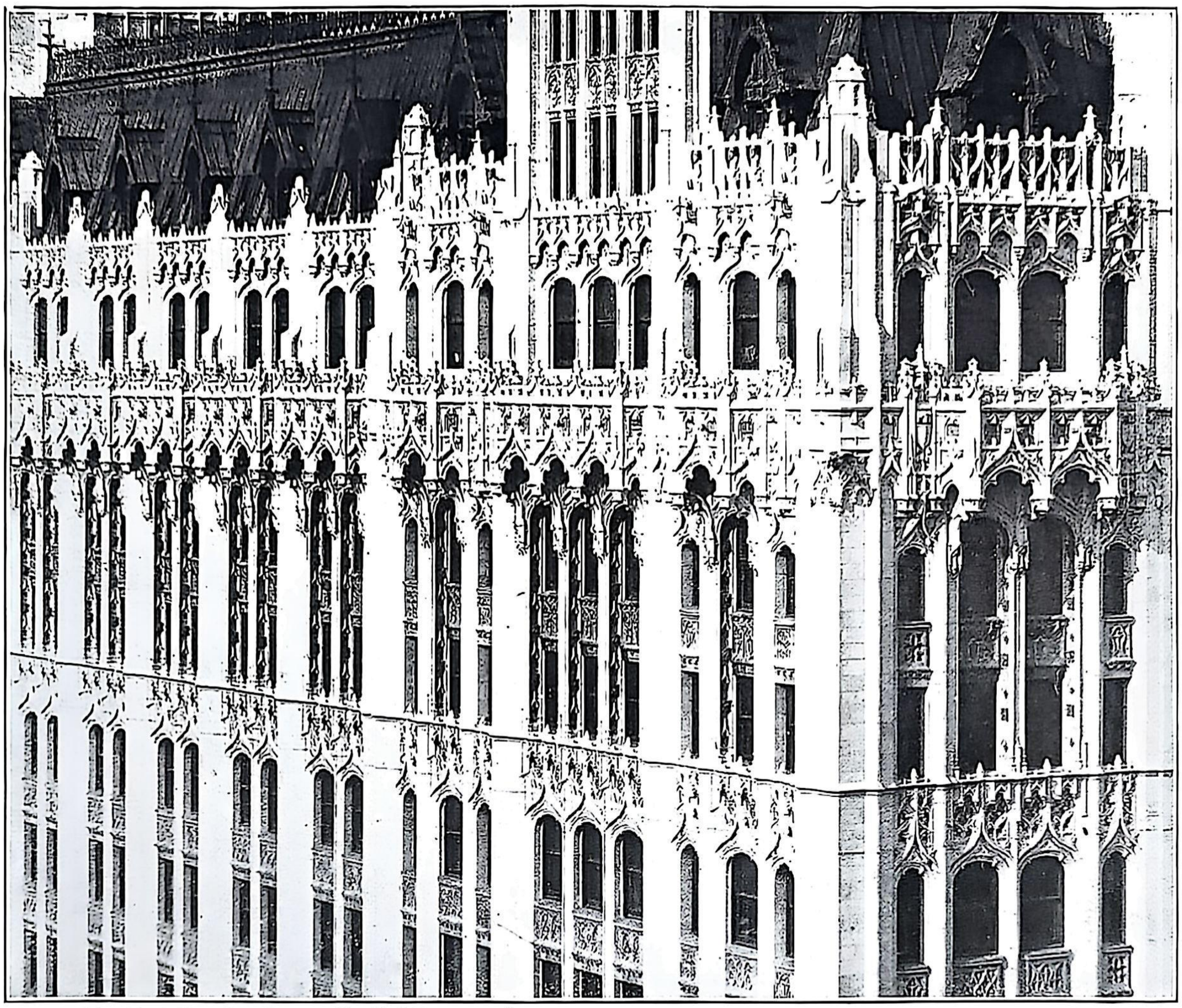

Courtesy of the Atlantic Terra Cotta Company, New York City.

Design and Color: Gothic Art Adapted to Modern Architecture. When you visit New York, you must not fail to see the Woolworth building, located on lower Broadway. Although it is an office building, it is as beautiful as the Gothic cathedrals of Europe, and it expresses perfectly the needs and ideals of our own times. It would be hard to imagine a building more successfully designed, for it combines the most remarkable construction with great architectural beauty, while at the same time it is thoroughly practical as a building for commercial purposes.

When we say that it is "Gothic" in style, we mean that the general character of its construction and ornament is like the great cathedrals built in Europe in the middle ages; but these Gothic features have been so perfectly adapted to our present day needs that we may rightfully speak of it as an American style, showing the influence of Gothic art.

The building rises to a height of 789 feet above the sidewalk, and its facade is fairly dazzling. There are 27 stories in the main building, and 56 stories to the top of the tower. A plastic material called terra cotta, is used for the modeled ornament, and the effect of vertical movement is heightened by the use of color in the background, against which the creamy ornament appears like delicate lace.

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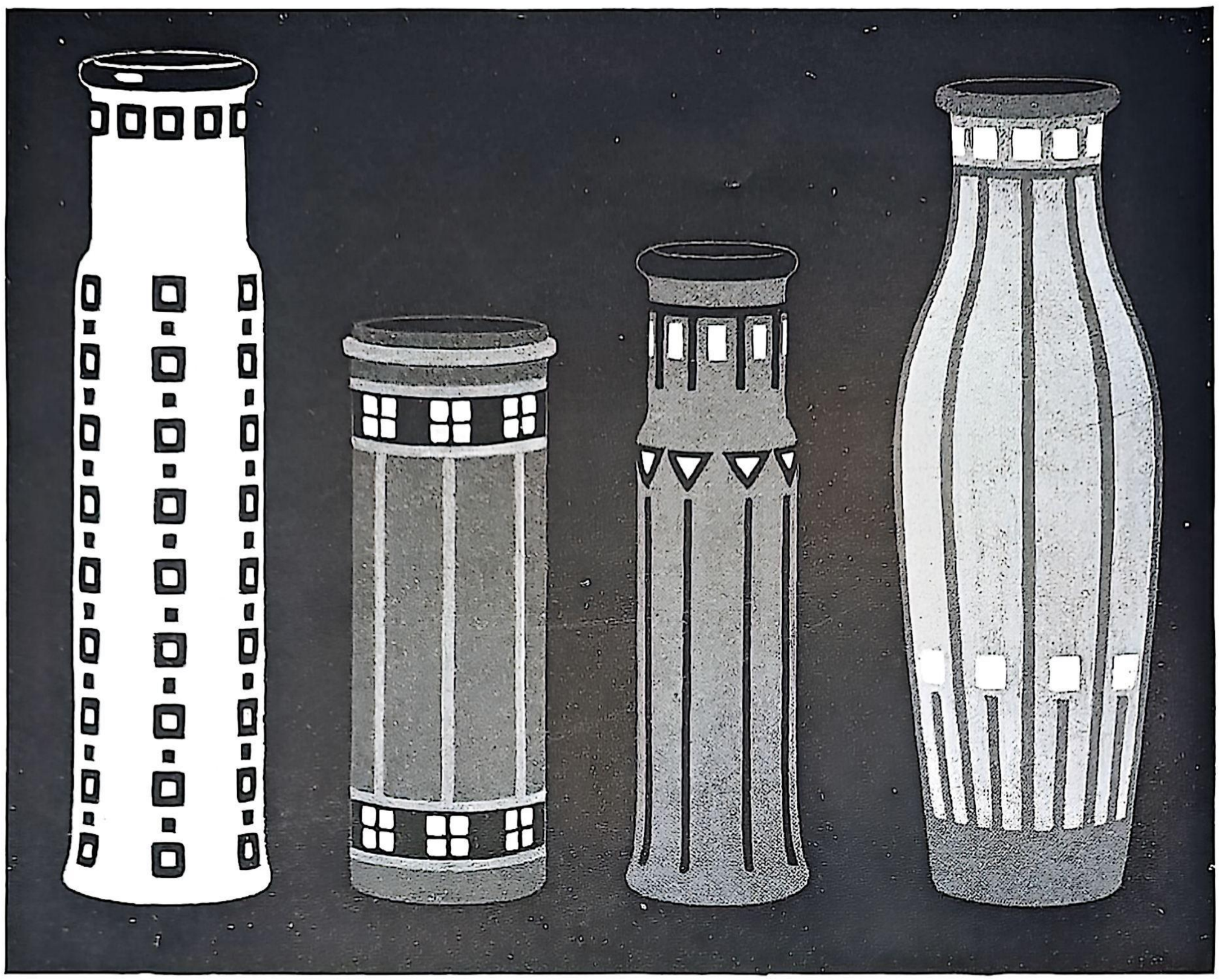

· Fig. 1 ·
White Bottle
Violet Design

· Fig. 2 ·
Blue Bottle – Green,
Black and White Design

· Fig. 3 ·
Orange Bottle - Black
and White Design

· Fig. 4 ·
Green Bottle – Blue
and White Design

Design and Color: Decorated Bottles as Factors in Flower Arrangements.

Olive bottles were selected for these flower holders because they are fine in proportion and in line quality. Not every "container" is a fit subject for decoration. A mason fruit jar, for example, would be unsuitable for use as a flower holder because its proportions lack the refinement and grace that we look for in vases.

The designs that appear on the olive bottles illustrated are all structural in their character. That is, they follow the dominating lines of the object, and so are vertical in their movement.

The bottles were washed clean, and all labels removed. Then a color scheme was decided upon. The color chosen for the background was then applied, using Enamelac and a No. 7 brush. This coat was allowed to dry over night or longer, if necessary. Then the decorative bands or shapes were painted on, with a No. 3 brush. After several days, a coat of transparent varnish was spread over the entire surface of the painted bottle.

The most interesting part of this lesson is the selection of the right flowers to be placed in the differently colored bottles, to complete the color scheme.

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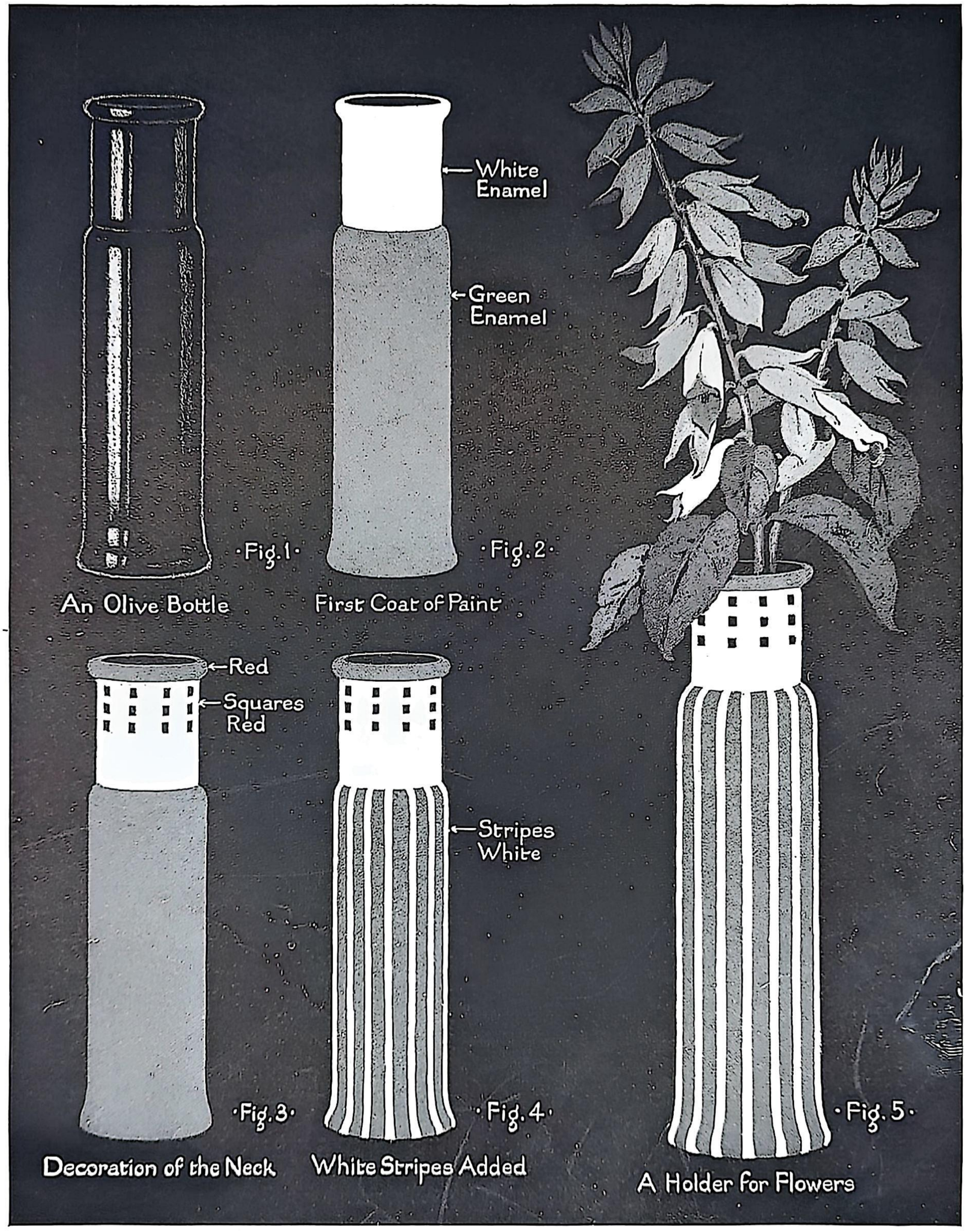

Design and Color: The Transformation of an Olive Bottle. Above are shown the various steps in painting an olive bottle, planned to hold scarlet sage, or salvia.

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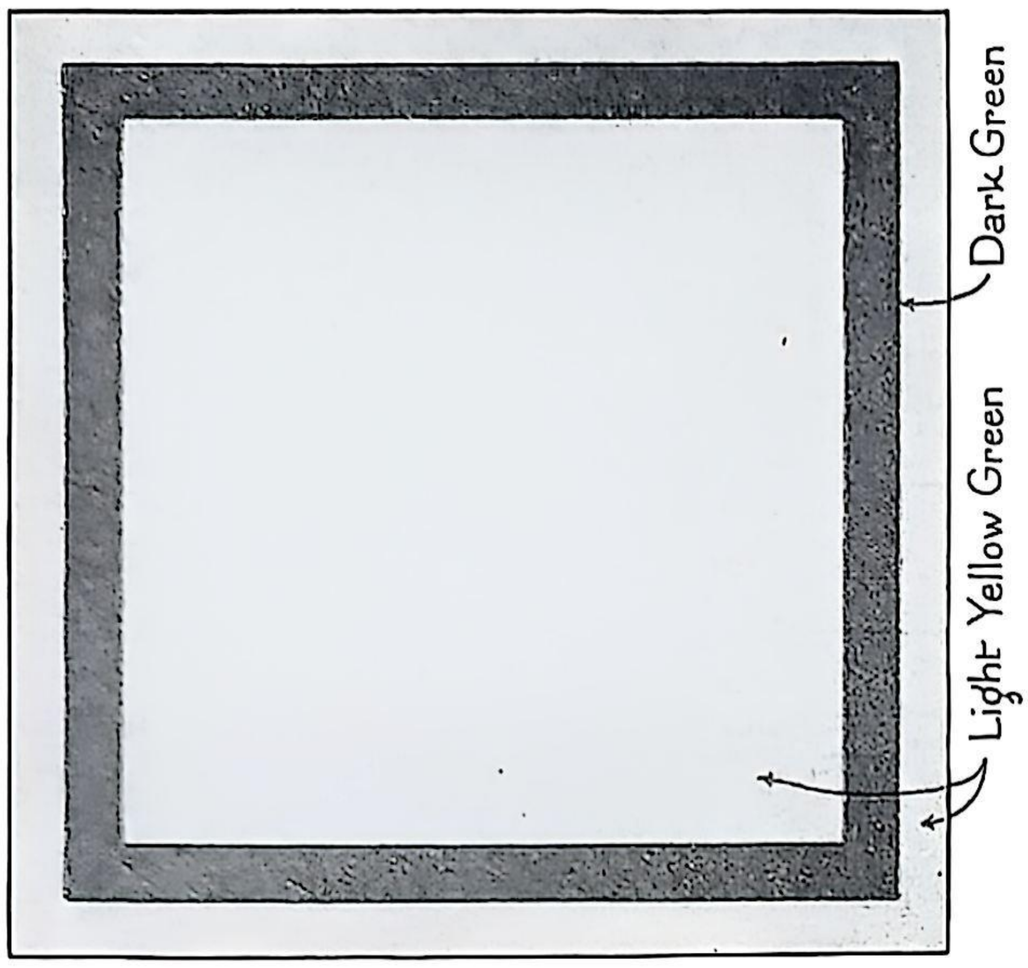
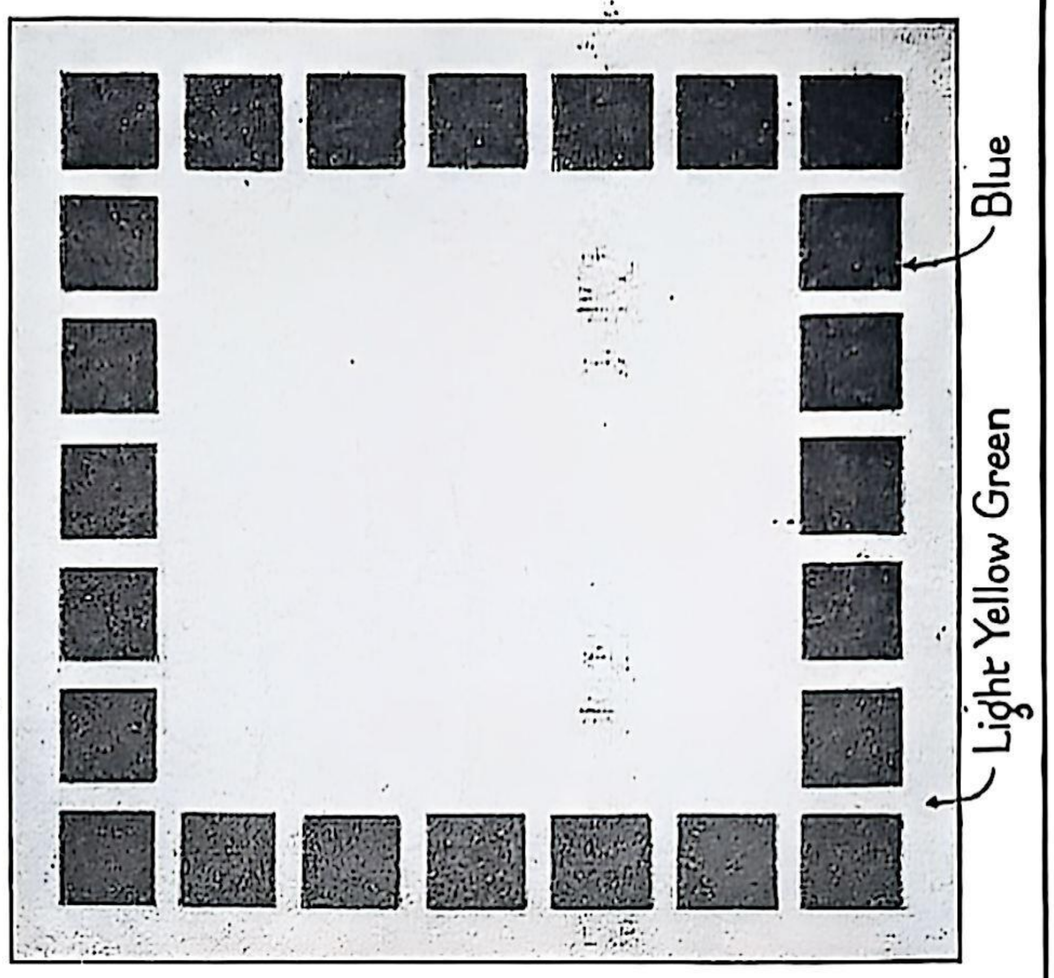
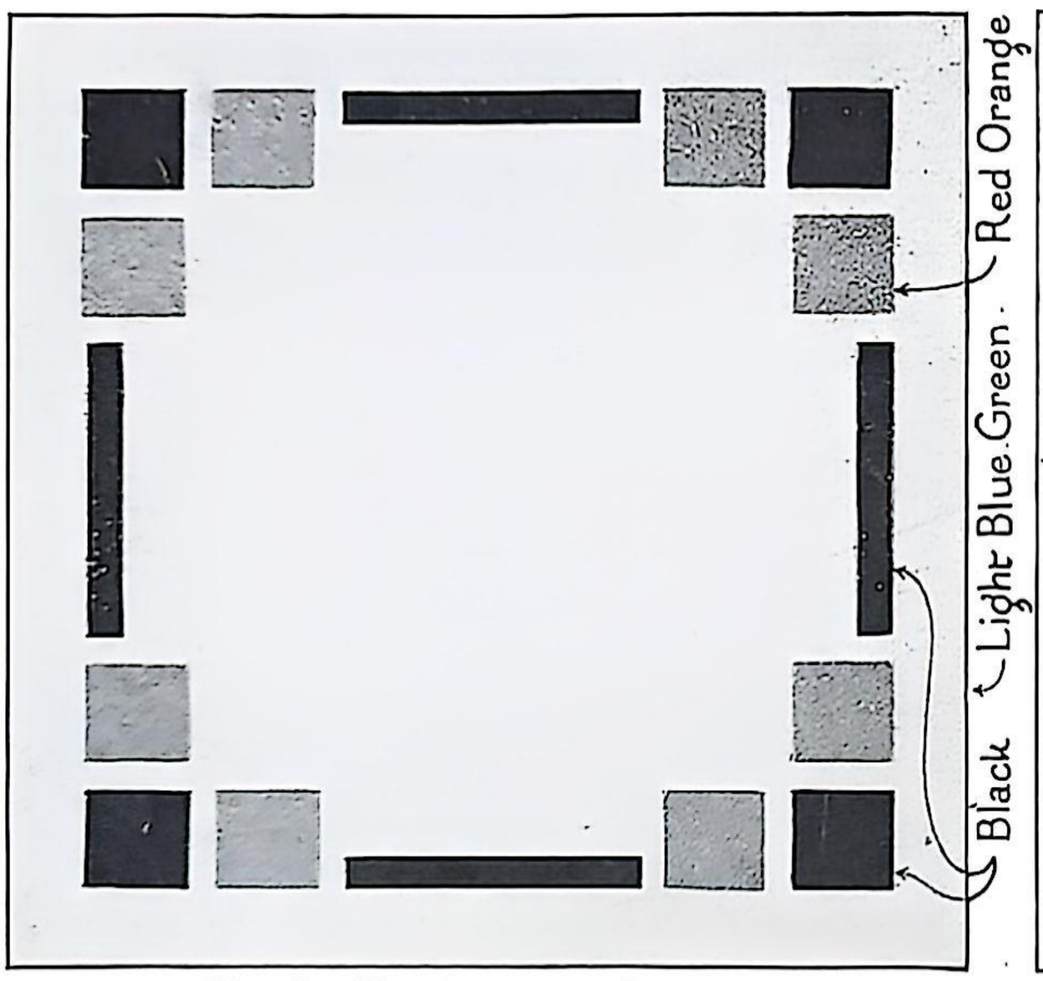


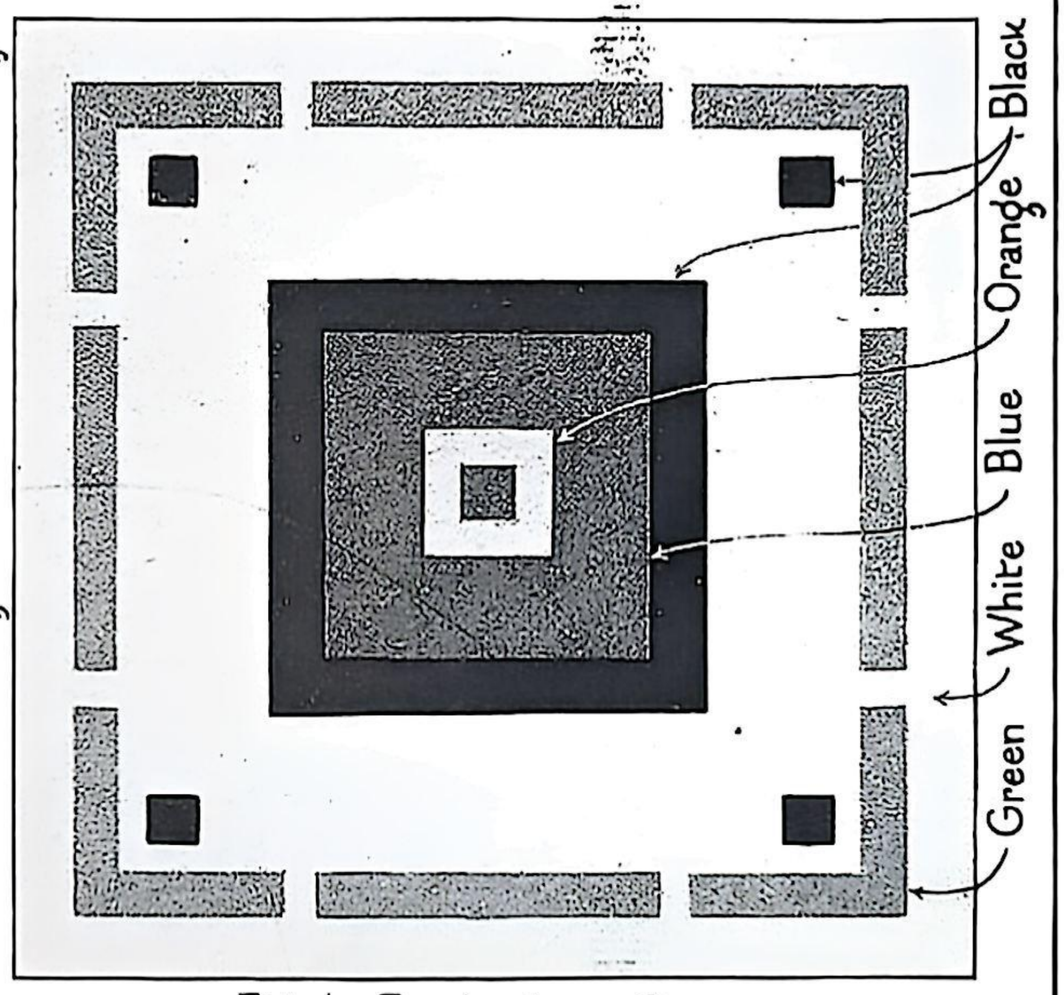
· Fig. 1 · Marginal Band



· Fig. 2 · Emphasis on Border



· Fig. 3 · Emphasis at Corners



· Fig. 4 · Emphasis at Center

Color and Design: Cut Paper Plans for Structural Designs.

1. Cut a 4″ square of light yellow-green paper. Cut smaller squares, differing in size of the same color, and of dark green. Place these squares so that their centers coincide. Trim the smaller squares to give the effect of a marginal band of fine proportions. Paste in place.

2. On a 4″ square of light yellow-green paper, paste a border of small squares, cut from ultramarine blue paper.

3. On a 4″ square of light blue-green paper, arrange small squares of black and red-orange papers, with black connecting bands, to look like Fig. 3.

4. Express, in colored papers, the design shown in Fig. 4.

5. Make an original structural design, in a square, using cut papers.

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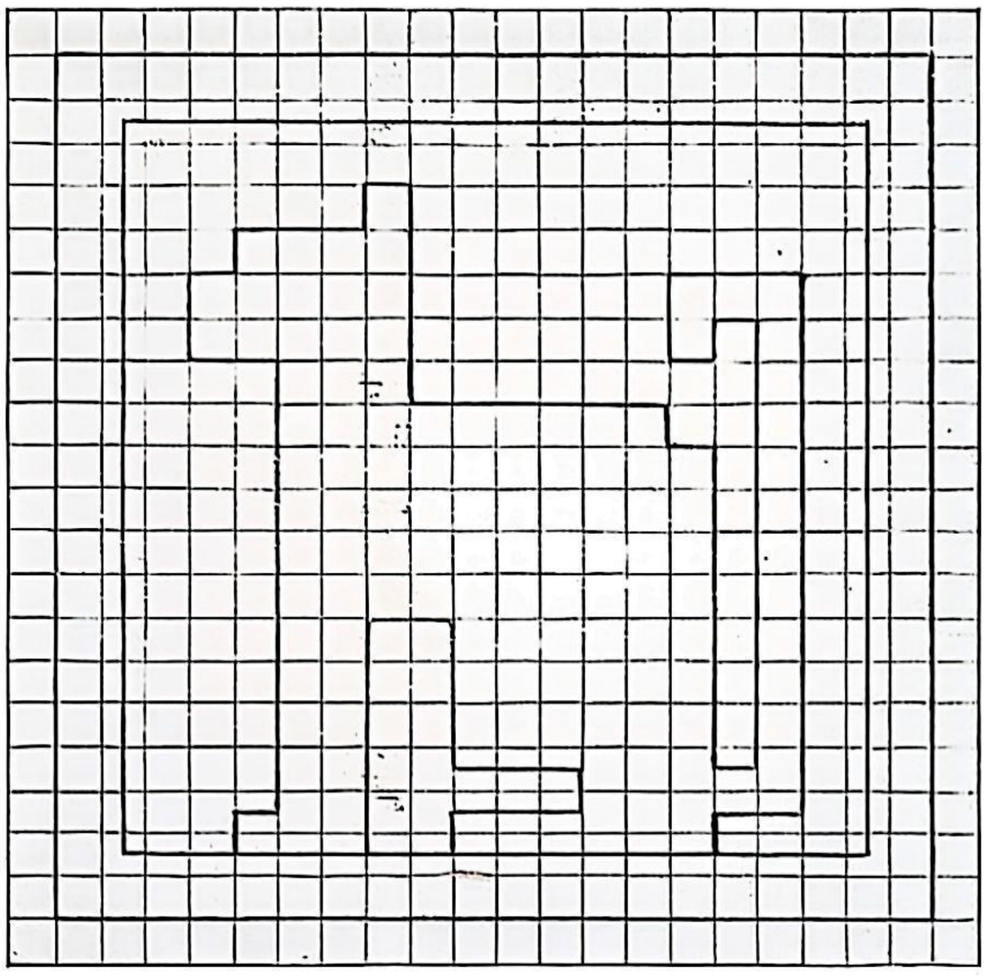
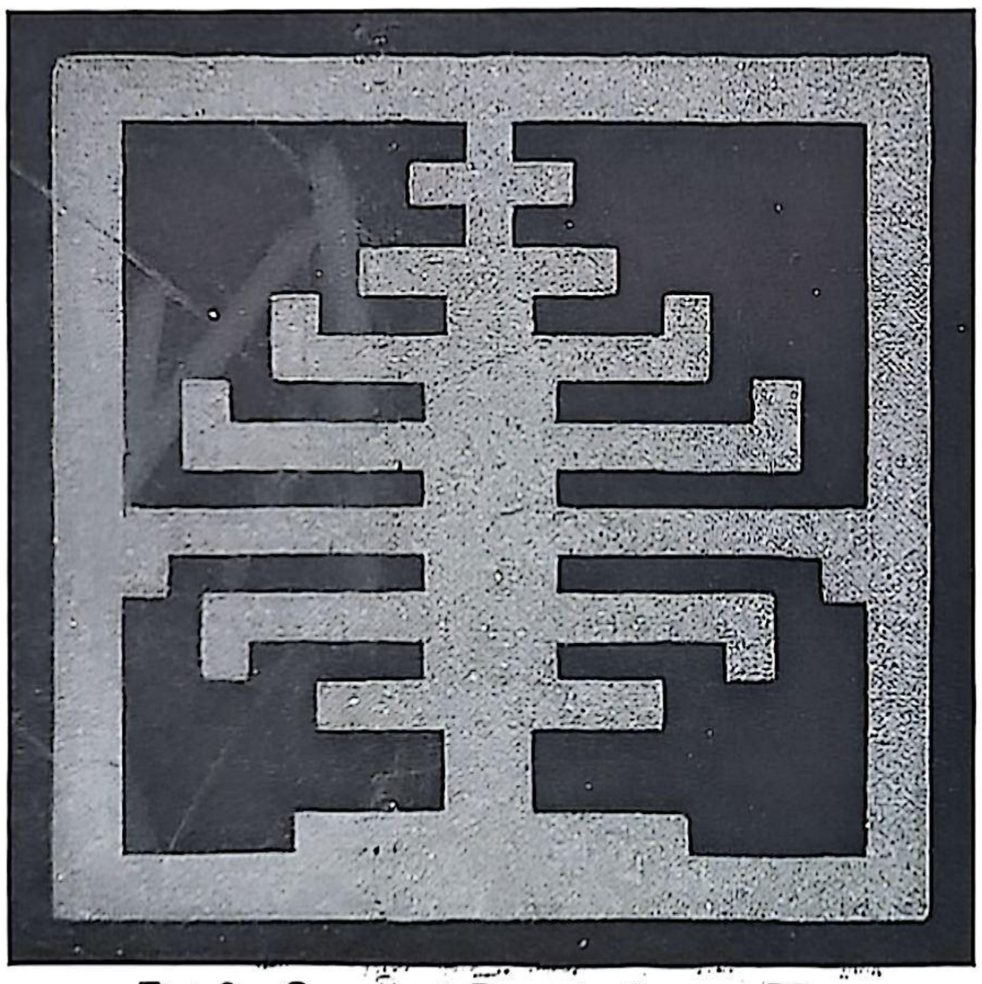
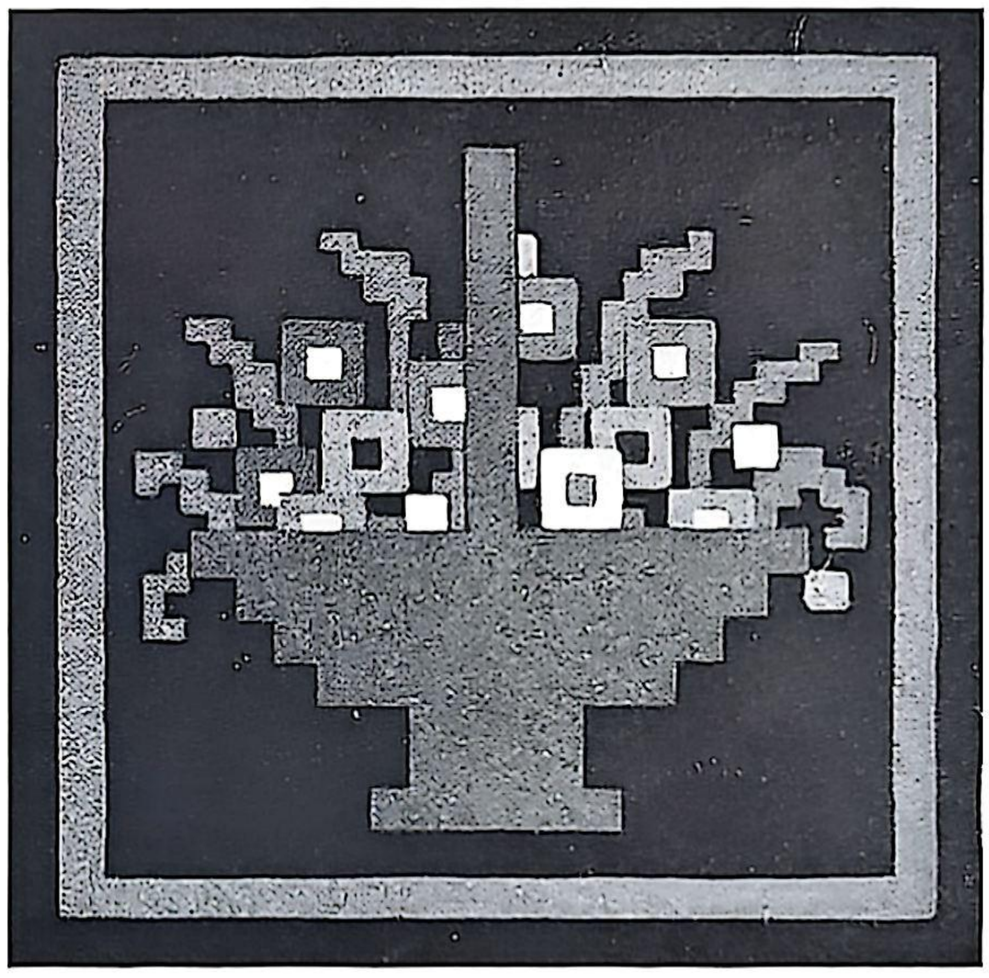


· Fig. 1 · First Step in Squaring Design

· Fig. 2 · Design Traced and Painted
Background: Black · Design: Orange



· Fig. 3 · Squared Design from a Tree
Background: Black · Design: Light Green



· Fig. 4 · Squared Design from a Basket of Flowers
Background: Black · Basket: Gray Orange
Border: Yellow

Design and Color: Painted Designs Planned on Squared Paper. The designs on this page are suggestions for the decoration of the top of a square box. They are first planned on squared paper, then traced on the surface to be painted. Tracings may be made by rubbing soft lead pencil on the back of the design, placing the rubbing next to the surface, then drawing over the lines with a sharp, hard point. Tin boxes should be painted with enamelac. Paper or cardboard boxes should be painted with opaque water colors. This may be varnished afterward, if desired. The students in all cases should plan their own designs, using the illustrations on this page merely as suggestions.

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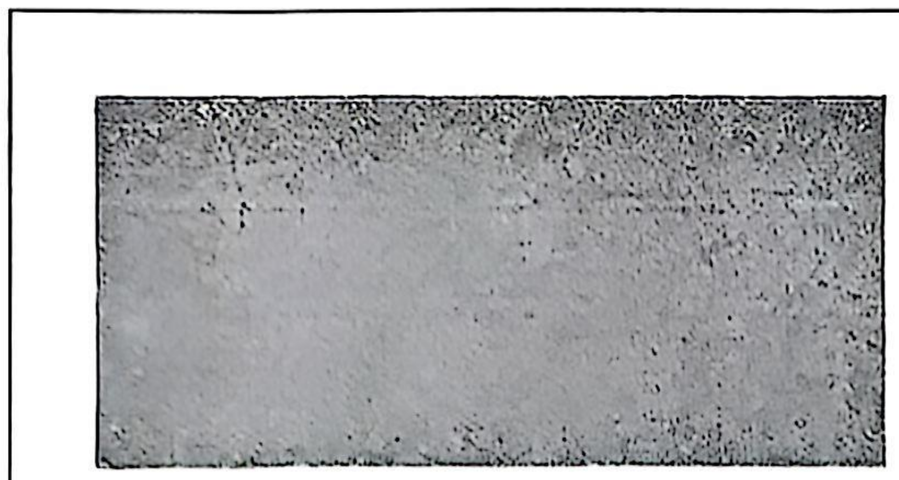
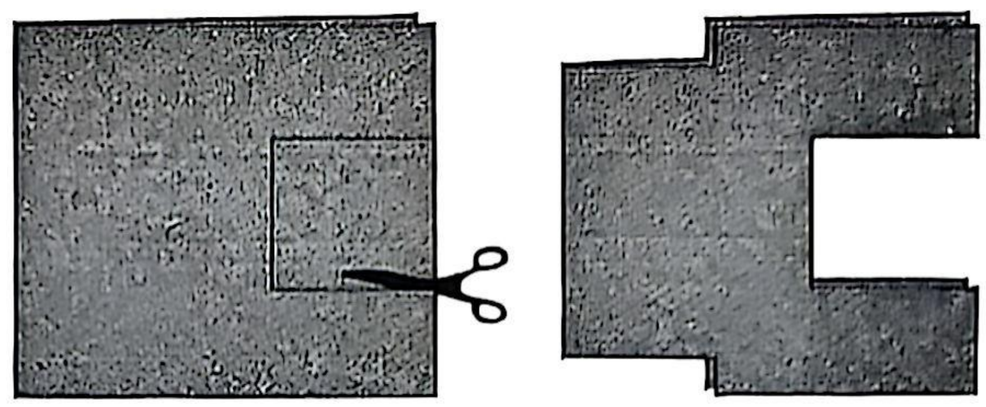
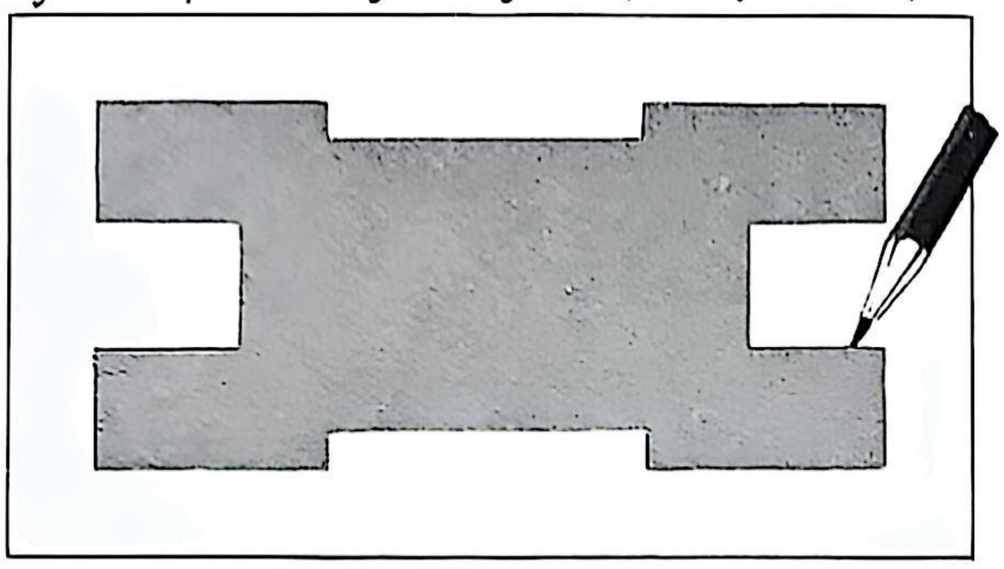


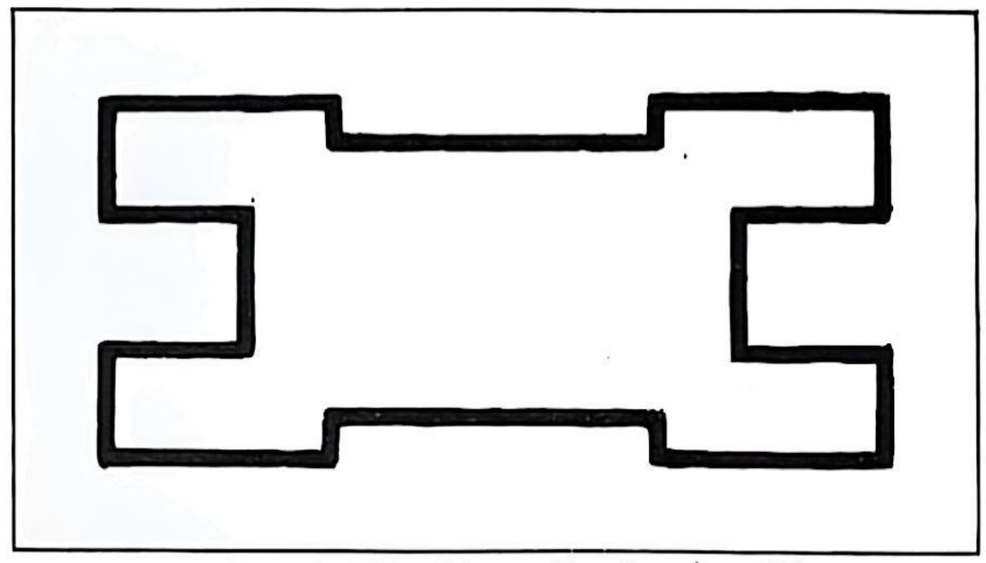
· Fig. 1 · A Paper Rectangle in Right Proportion to the Space



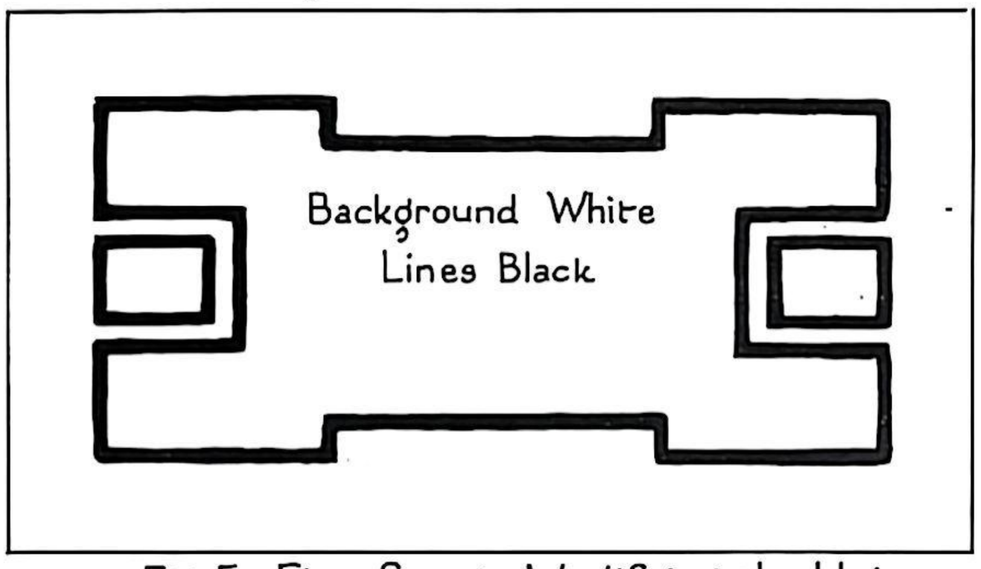
· Fig. 2 · Rectangle Folded and a Simple Unit Cut



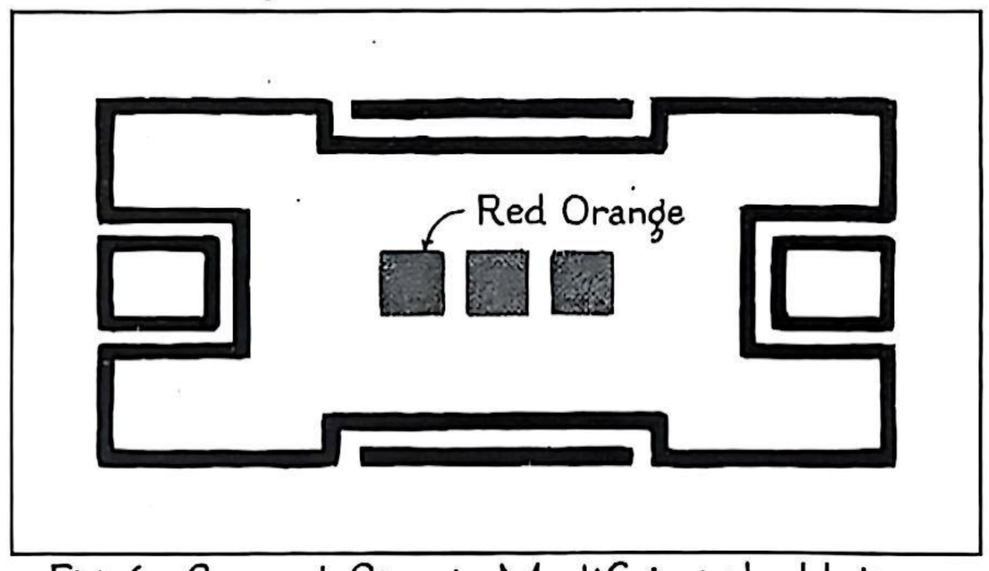
· Fig. 3 · The Unit Traced



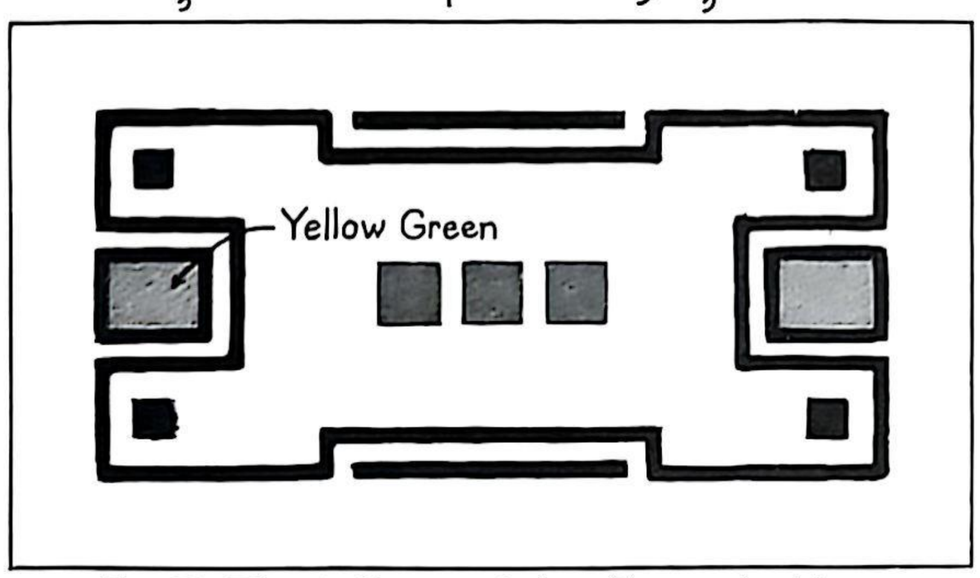
· Fig. 4 · The Unit Outlined in Black



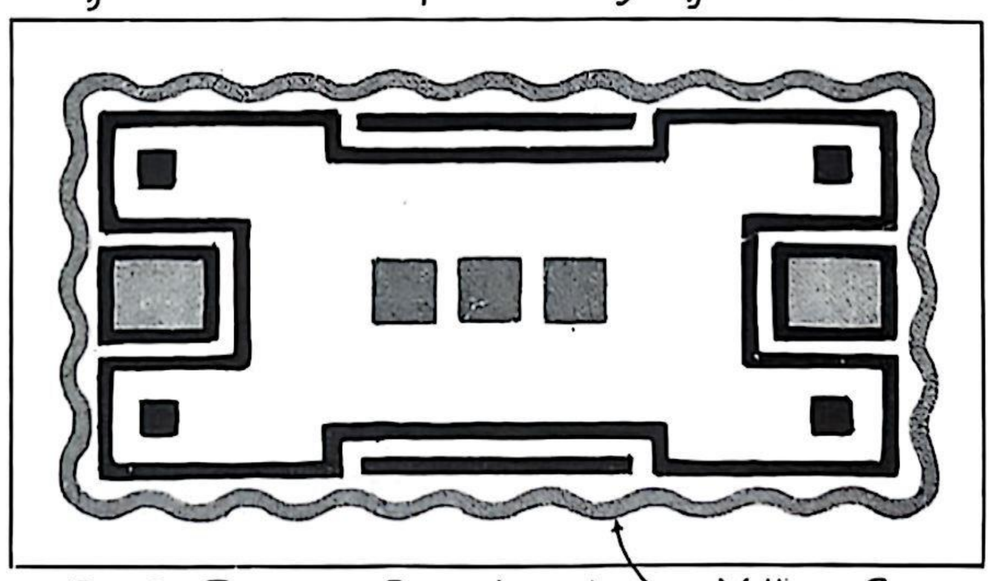
· Fig. 5 · First Step in Modifying the Unit



· Fig. 6 · Second Step in Modifying the Unit



· Fig. 7 · Third Step in Modifying the Unit



· Fig. 8 · Design Completed

Design and Color: Development of a Structural Design for a Rectangular Space. The illustrations on this page show the development of a structural design, planned for a definite rectangular space. Cut a rectangle of white paper, about 3″ x 5½″. Cut a smaller rectangle of the proportion shown by the dark space in Fig. 1. Follow all the steps shown in Figs. 2 to 8. Then develop a structural design of your own.

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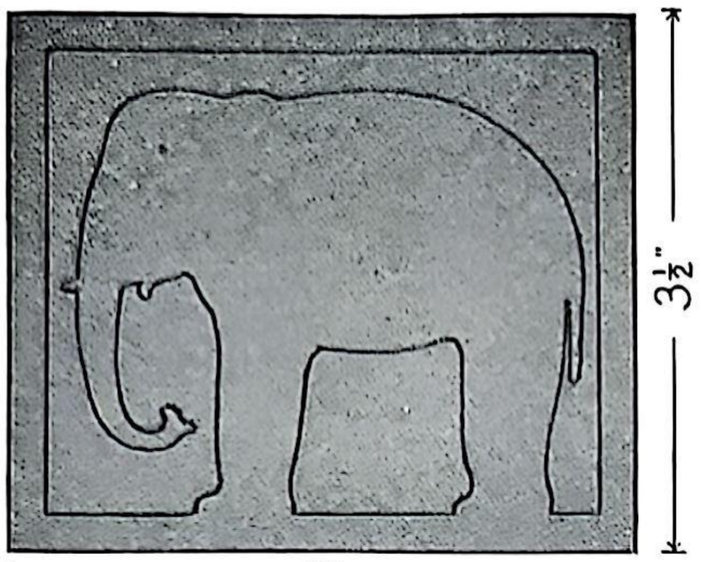
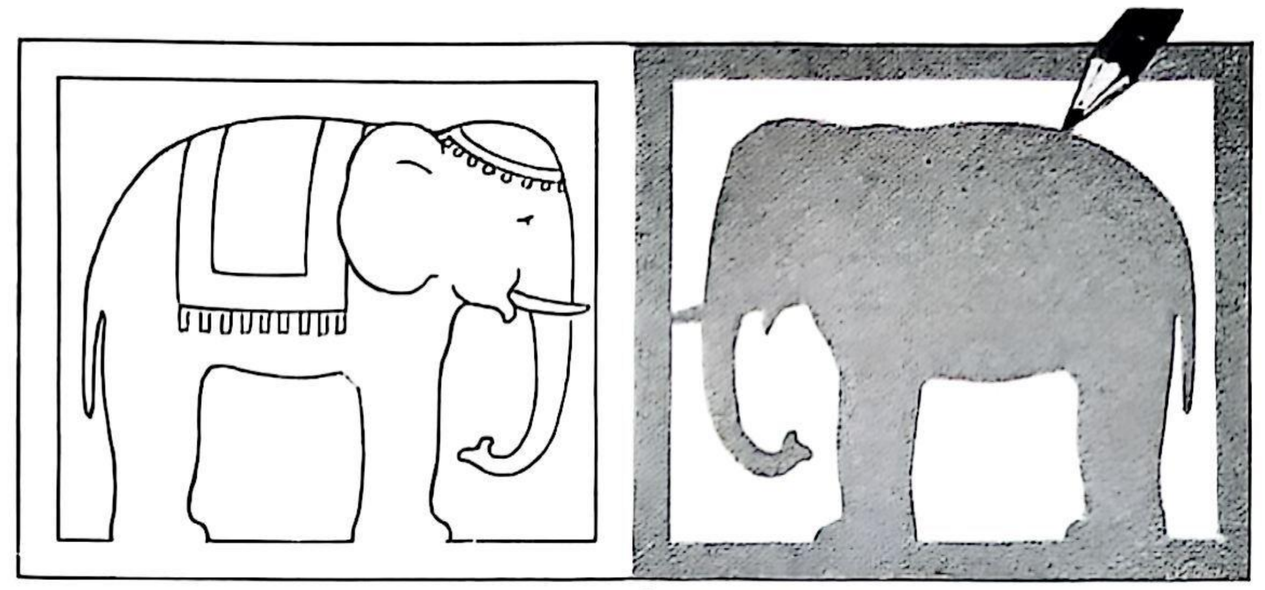
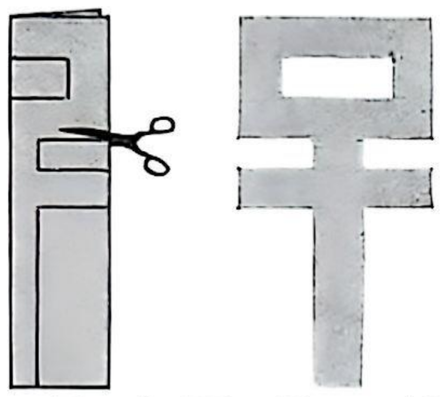


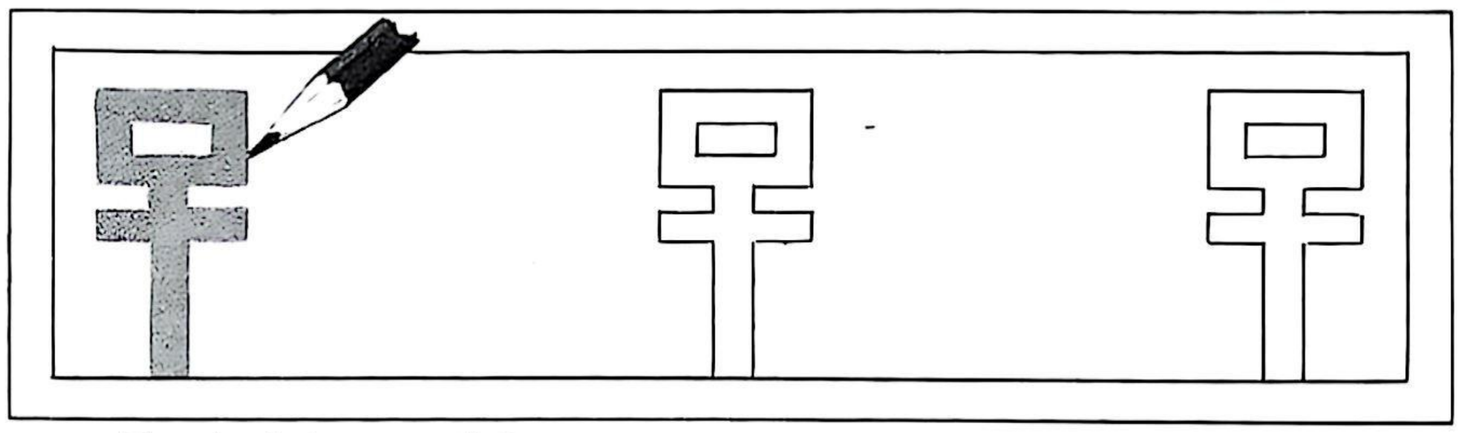
· Fig. 1 · Elephant Shape Drawn within Rectangle · Background to be Cut Out to Form Stencil



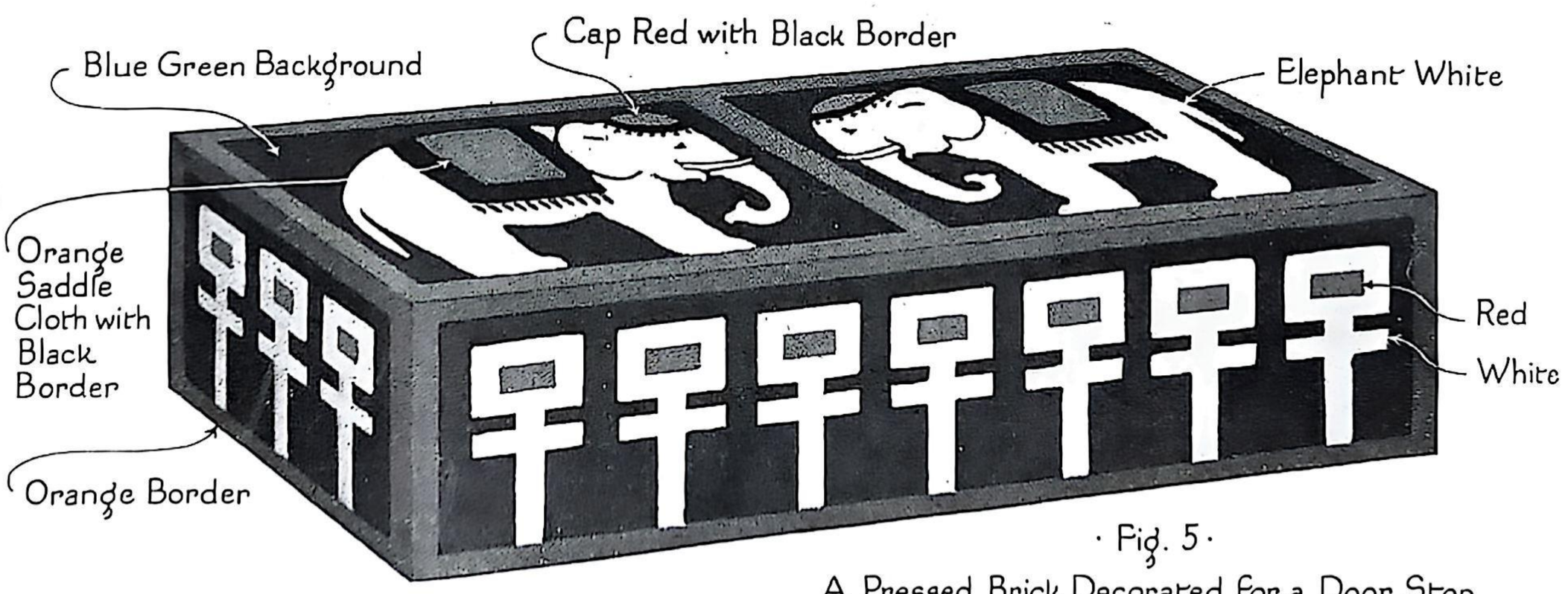
· Fig. 2 · Elephant Shape Traced Twice in Reversed Positions on Top of Brick



· Fig. 3 · The Paper Unit



· Fig. 4 · Method of Spacing and Tracing the Unit on Sides of Brick



· Fig. 5 ·
A Pressed Brick Decorated for a Door Stop

Design and Color: Structural Design Applied to a Useful Object. A door-stop is a weight placed on the floor, against an open door, to keep it from swinging shut. Fig. 5 shows a common pressed brick, decorated with a painted design, to be used for this purpose. A piece of felt has been glued to the bottom of the brick, so that a polished floor will not be injured. A structural design similar to that developed on page 14 might be used instead of the animal suggested above. The brick should first be painted with an "underlay" of common white oil paint. When this is dry, apply Enamelac in the color desired for the background. Let this dry thoroughly, then trace the design on this background and fill in the shapes with the selected colors of enamelac.

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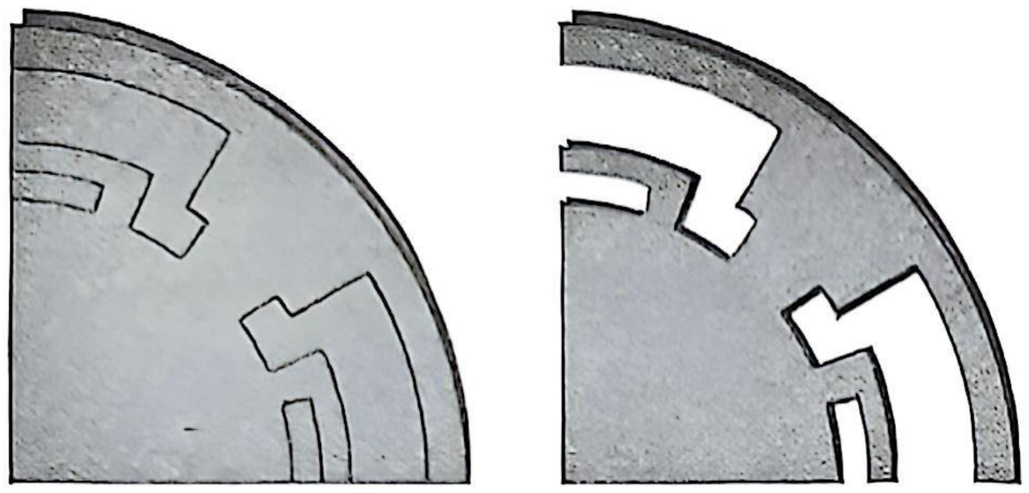
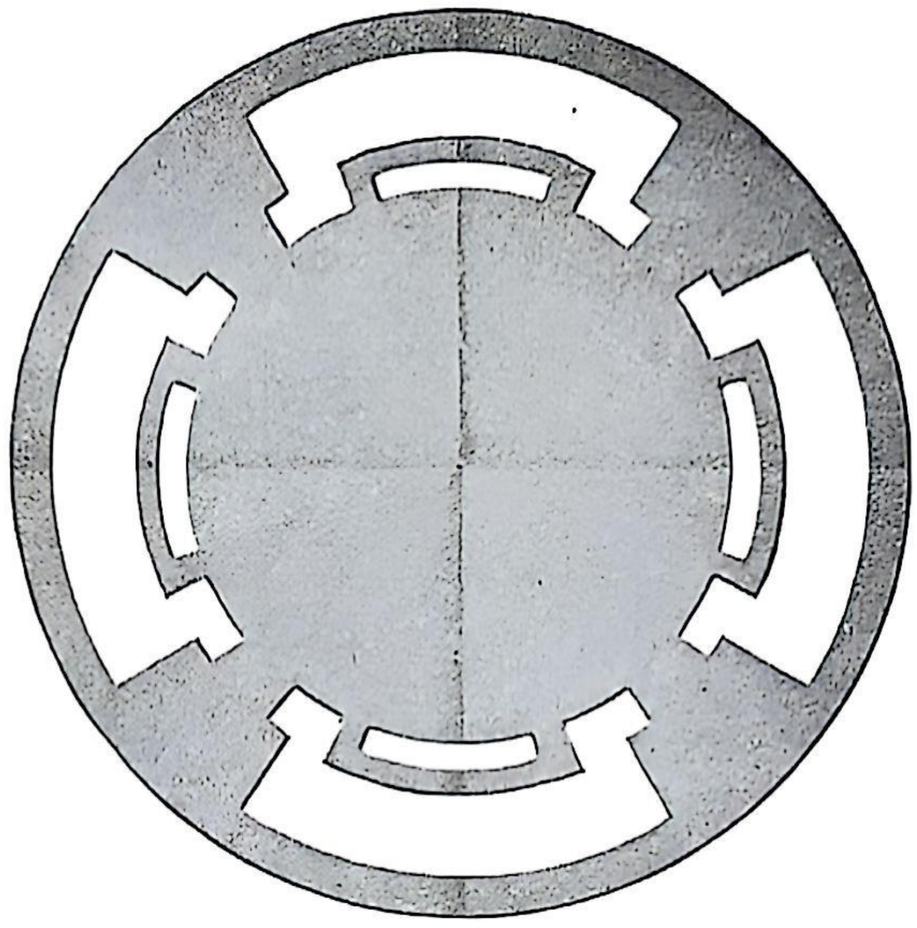
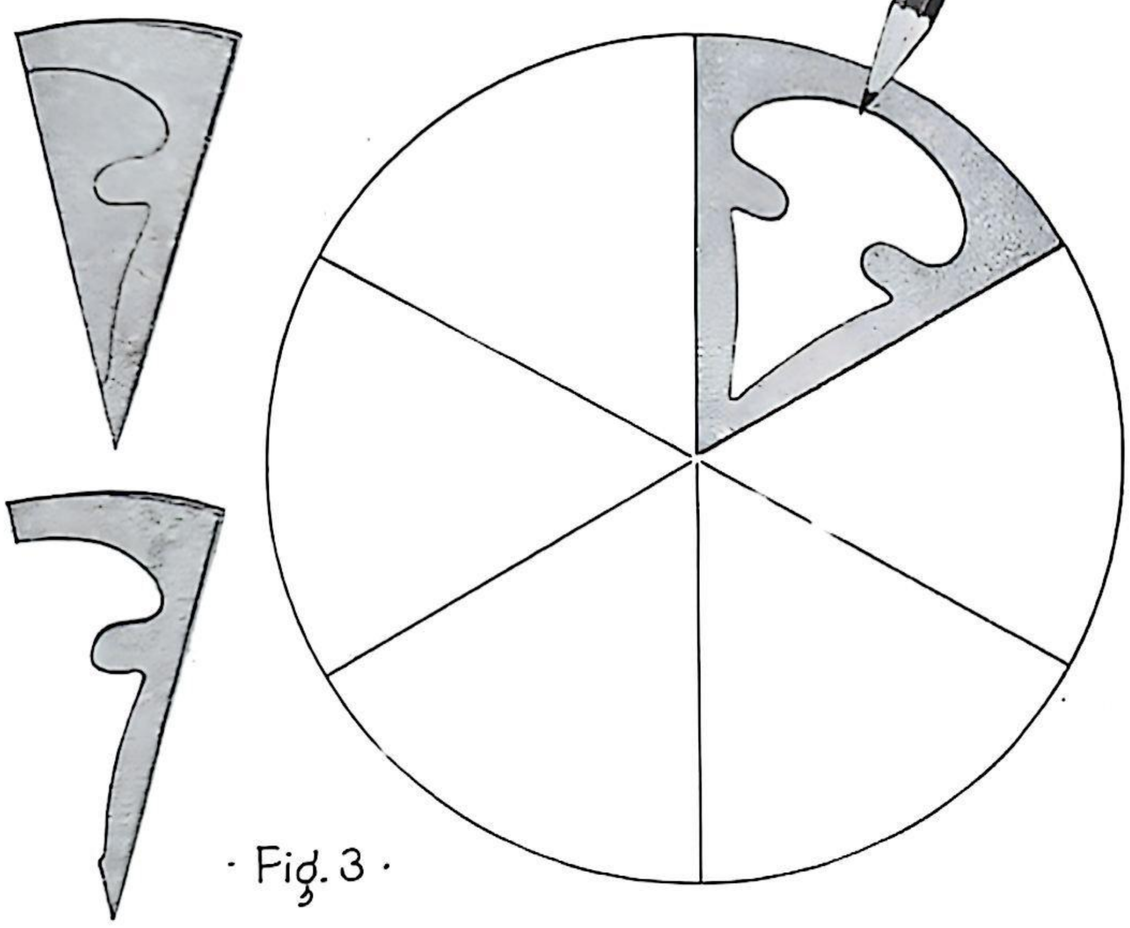


· Fig. 1 ·

Paper Circle Folded on Two Diameters
Design Traced and Cut



· Fig. 2 · The Stencil Completed



· Fig. 3 ·

Hexagonal Division of Circle
Stencil Made to Fit One of the Six Parts

· Fig. 4 ·
The Design Completed

Design and Color: Structural Designs for Circular Spaces. Two ways of preparing a stencil pattern for a circular space are given above. In Fig. 1, a three-inch circle was cut from paper and folded on two diameters at right angles to each other. On the four-fold quarter, a design was drawn in lines that were rhythmic with the curve of the circle. The unit thus formed was cut, resulting in the stencil shown in Fig. 2. In Fig. 3, a drawn circle was divided into sixths, by setting off the radius six times upon the circumference. Diameters were ruled connecting these points. A pattern of one of these six parts was traced and cut. This pattern was folded on its axis, and upon the fold a simple unit was drawn and cut out (Fig. 3). This little stencil was used in tracing the design, which was then filled in with tones of color, and outlined with heavy brush lines.

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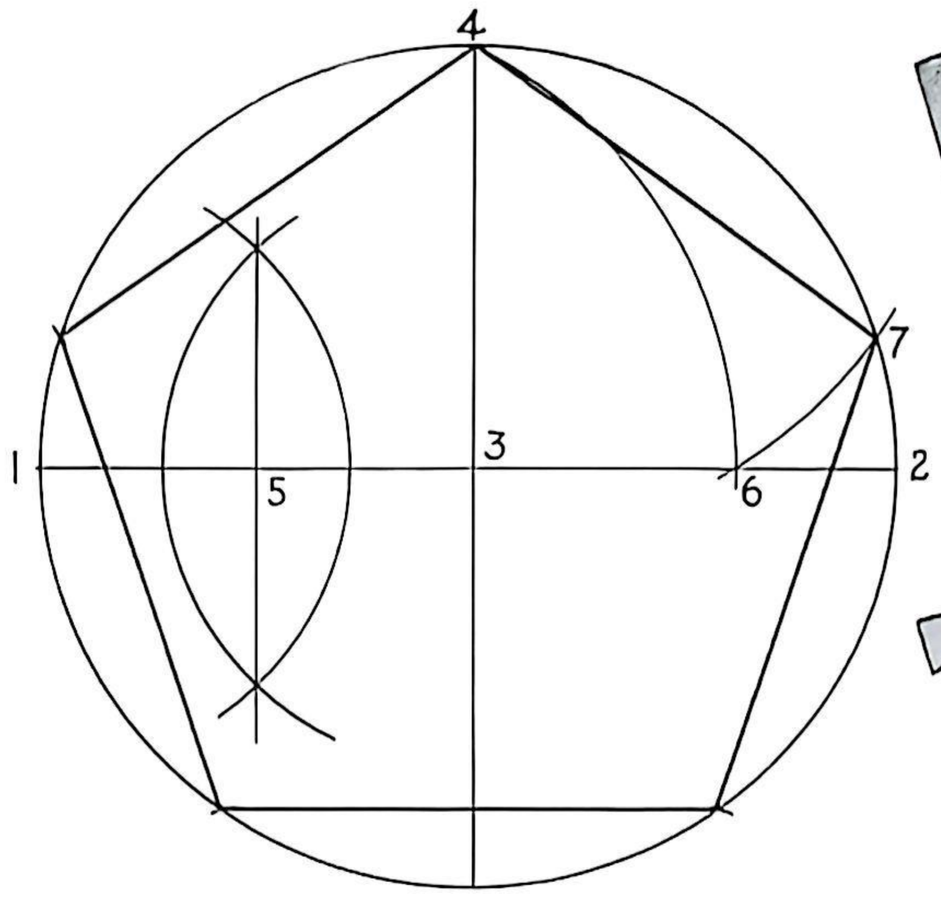
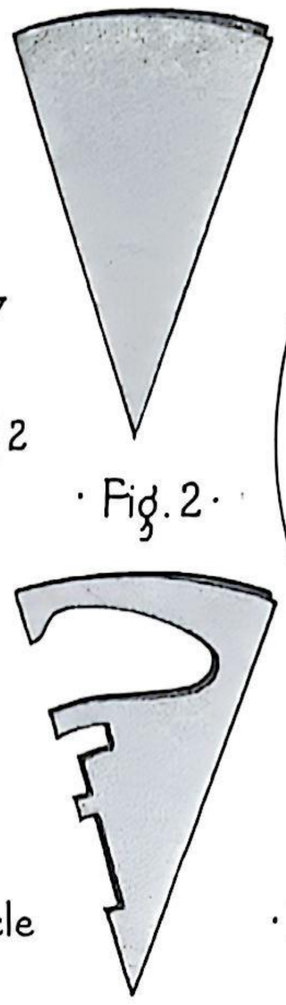
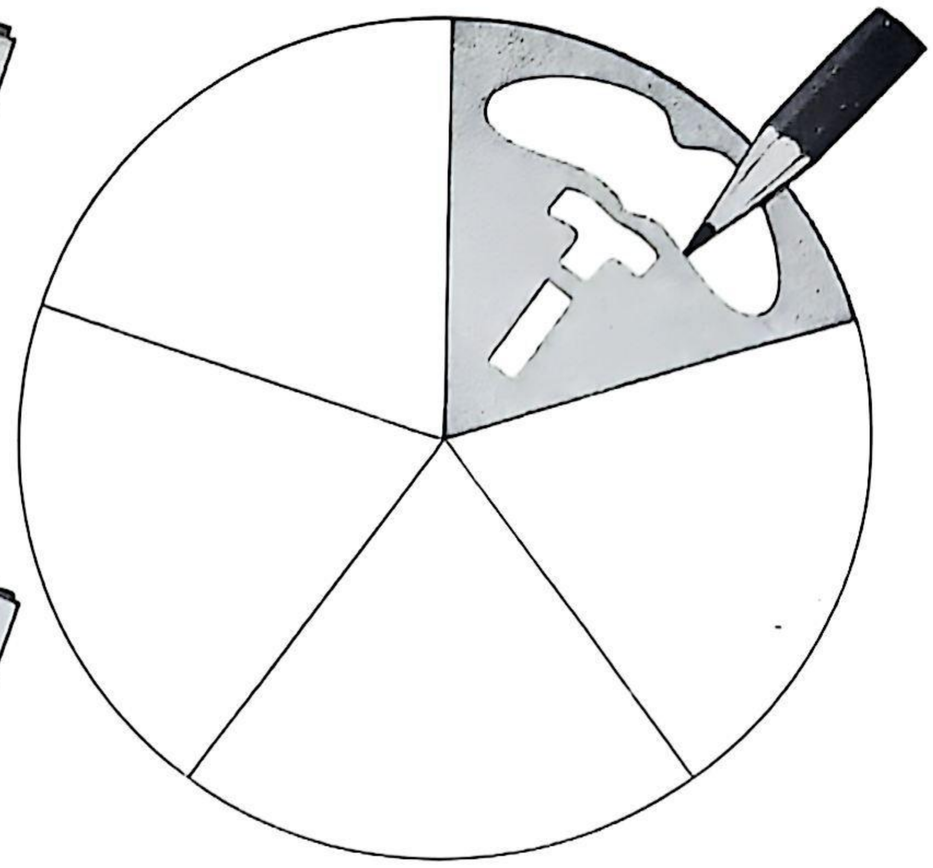


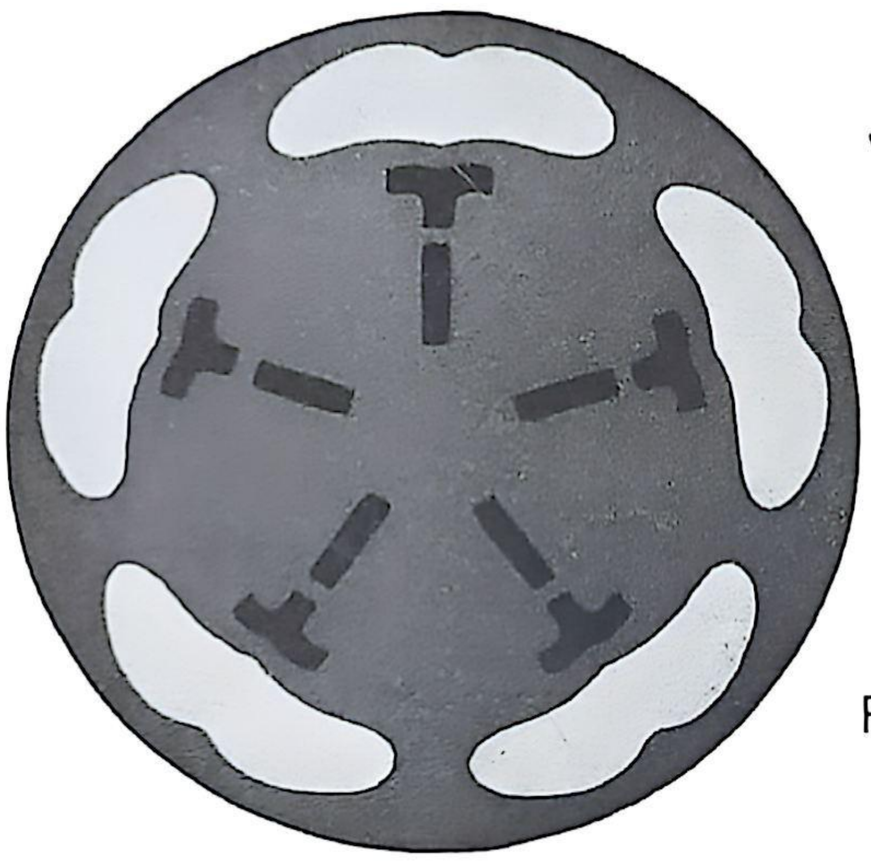
· Fig. 1 · A Pentagon Inscribed within a Circle



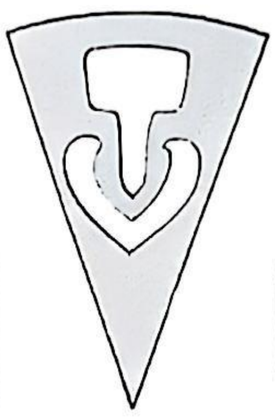
· Fig. 2 ·



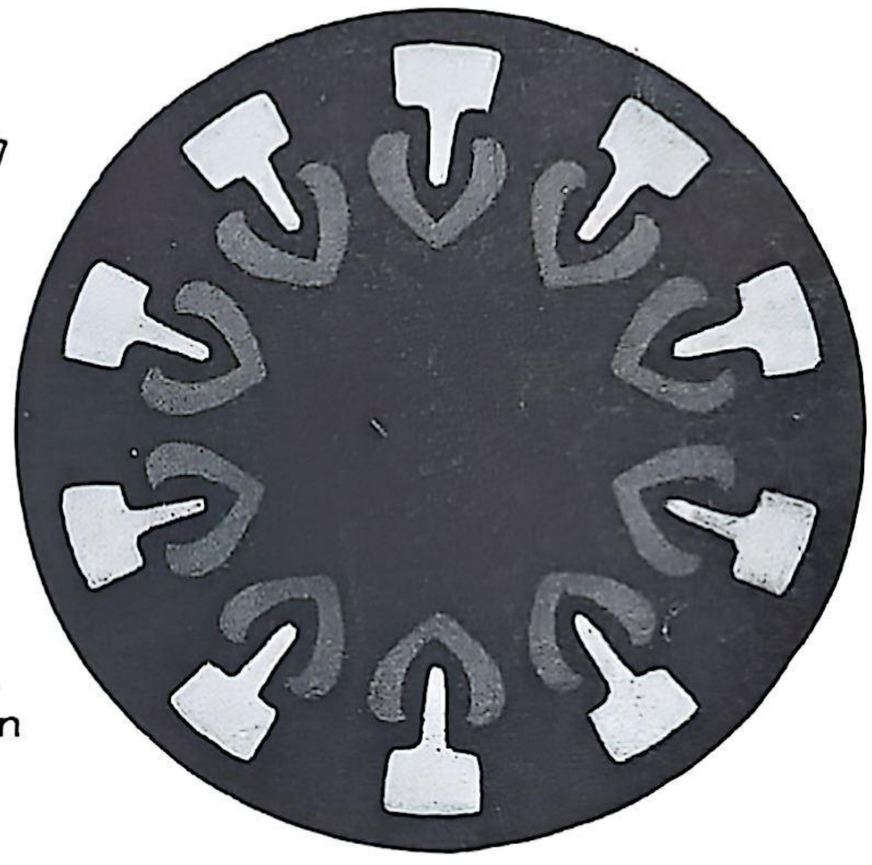
· Fig. 3 · Fig. 4 · Method of Preparing and Tracing the Unit



· Fig. 5 · A Five Parted Design
Background – Green · Design – Orange and Black



· Fig. 6 ·
Unit for Ten Parted Design



· Fig. 7 · A Ten Parted Design
Background – Black · Design – Red and Green

Design and Color: More Structural Designs for Circular Spaces. A geometric method of inscribing a pentagon within a circle is given in Fig. 1. This enables us to divide a circular space into five equal parts, and to trace and cut a pattern of one of these parts (Fig. 2). The unit of design was planned as described on page 16, and was traced five times within the circle (Fig. 4). The design was then filled in with opaque water colors, as indicated in Fig. 5.

Bisecting each of the five parts of the circle and drawing five more radii will give us a ten-parted circle. The design unit is planned as before, traced in each of the ten divisions, and finished with opaque water colors, in the scheme indicated (Fig. 7).

Students should plan their own design units, in carrying out the suggestions of these illustrations.

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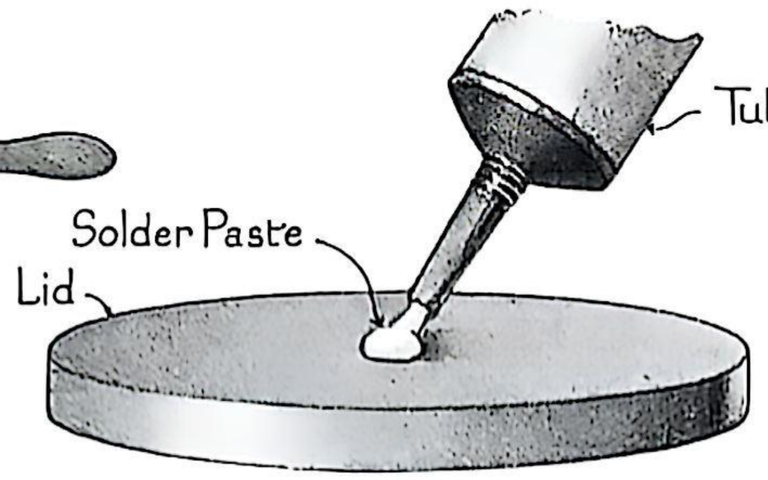
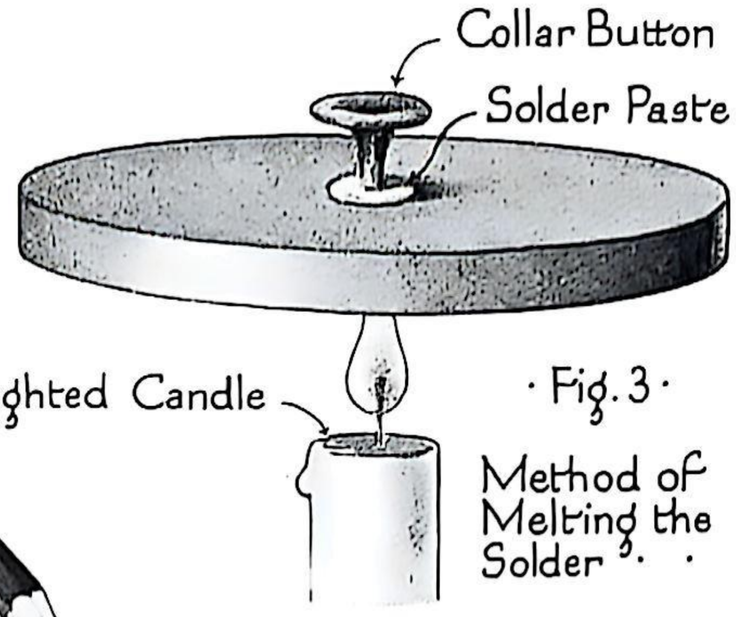
· Fig. 1 ·

Filing the Top of a One-Piece Collar Button ·



· Fig. 2 ·

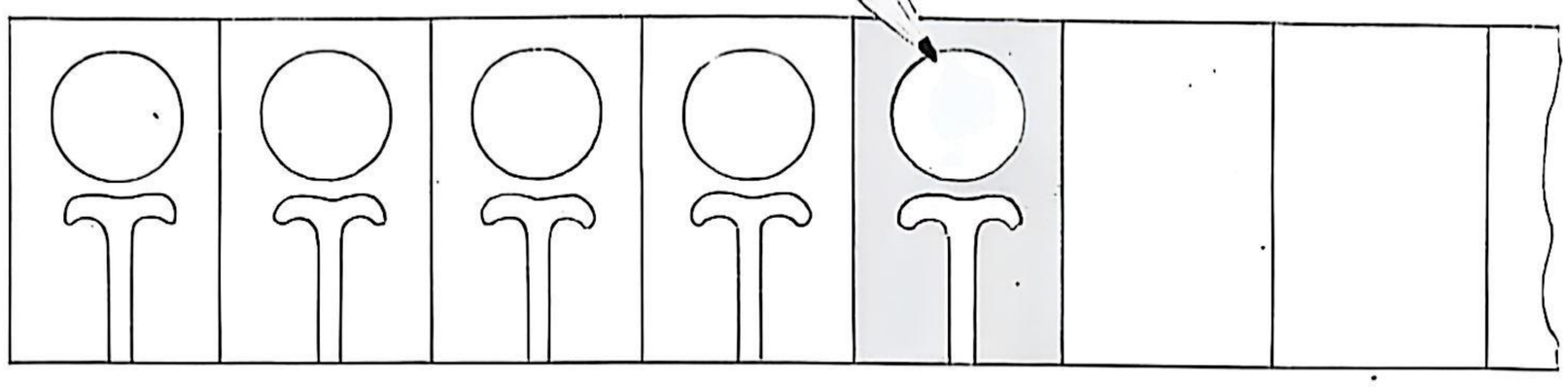
Solder Paste Applied to Center of Lid



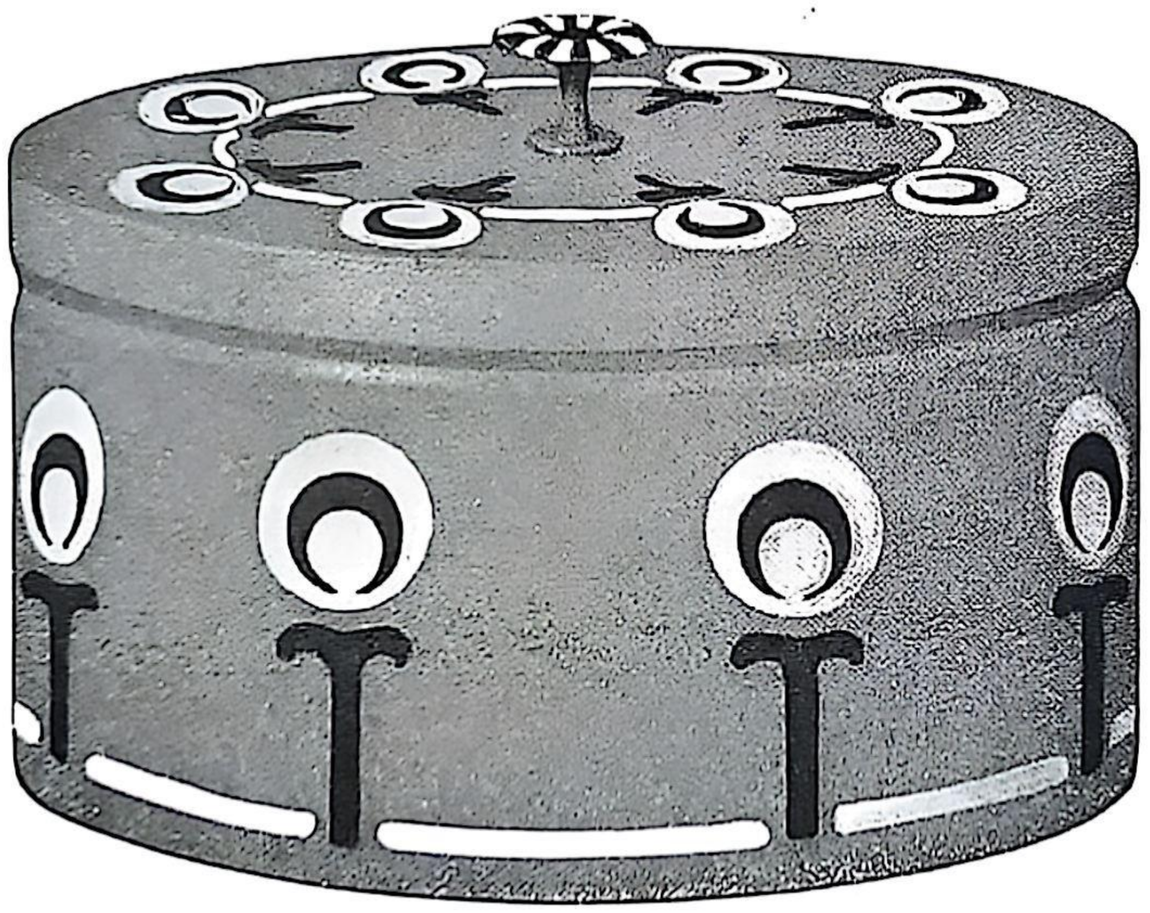
· Fig. 3 ·

Method of Melting the Solder · ·

· Fig. 4 · Stencil Unit



· Fig. 5 · Method of of Spacing and Tracing Decoration for Side of Box



· Color Scheme ·

Background – Blue
Design – Black and Yellow Orange · ·

Design and Color: Structural Design Applied to an Object with Circular Faces. Another delightful transformation can be wrought in an empty tin marshmallow box. The handle is a one-piece brass collar button. The head of the button is filed. Solder paste is applied both to the head of the button and to the center of the cover. The head of the button is then placed at the center of the lid, and a lighted candle is held for a moment under the cover (Fig. 3). The whole box is then given a coat of Enamelac, and the box is set away to dry. A strip of paper long enough to fit around the box is cut, and a design unit is cut, spaced and traced upon it (Fig. 5). A stencil for the top is cut. The stencilled patterns are then traced upon the top and sides of the box, and the shapes filled in with Enamelac, in the colors selected.

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CHAPTER II

COMMERCIAL DESIGN

Suggestions to Teachers

Different Phases of Commercial Design: Four phases of Commercial Design appear in this chapter: the study of standard alphabets, the use of these letters in various arrangements usually spoken of as "lettering," the designing of posters, and an exercise involving the making of a blank book. All of this work is exceedingly practical, as it deals with problems that inevitably occur in eighth grade and high school classes. When the problems of poster making, the hand lettering of an announcement or bulletin, or the making of a blank book or post-card album, are developed without the guidance and control of art principles, the results are sure to be of low grade. It is the presence of *art* in all our common problems that redeems life from the realm of the commonplace and makes it interesting and beautiful.

The Roman Alphabet: The following is quoted from the book on "Lettering" by Thomas Wood Stevens: "Most modern work in lettering requires the use of Roman capitals, and since all the other forms the student is called upon to draw are descended from these capitals, the study of letter forms should begin with them. The Roman capital form was taken over, with some radical changes, from the Greek, and was used by the Latin scribes in copying great libraries during and after the Augustan age. It varied, under this use, as widely as handwriting varies in any period; but it served for the ready production of clear copy in the ancient manner, without punctuation or separation of words. The scribes wrote with soft reeds, dipped in ink and held vertically. The reed was sharpened to a flat or chisel point. This determined the direction of the heavy strokes in each letter, making the first (upward) stroke of the A light, the second (downward) heavy, the cross-bar (horizontal) light, and so on through the alphabet. This distribution of heavy and light strokes was finally determined by the practice of the reed, and the student has only to learn it, since he cannot abrogate it.

As written with the reed the style of the letters varies widely. But when the Roman builders with their strong sense of the monumental and the significant, took the letter and spread it in stately inscriptions on triumphal arches, it took a character from the stone, crystallizing into a marble perfection. And because you cannot draw a V-shaped incision in stone to a square end that will define itself in shadow, as a monument letter must do, the classic craftsman added a serif. This was at first a simple chisel cut across, following the scratched guide lines, and defining the end of the stroke. But the serif soon came to be made of two minor incisions, and to have a certain proportion to the letter itself. Thus another characteristic was added to the Roman form."*

The Drawing of Letters: It is necessary to teach first the forms and proportions of block letters, so that the pupil may have a foundation upon which to build. Probably no other factor has been so important in the improvement of lettering in the elementary schools as the device of paper cutting, and before the drawing of Roman capitals and lower case is attempted, the teacher should see that the pupils can cut and draw with considerable accuracy, the simpler alphabets presented in the preceding books.

The alphabets given in this chapter should be drawn with ruler and pencil, and afterward filled in with ink.

---

*From "Lettering"—By Thomas Wood Stevens—The Prang Co.

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Commercial Design: Roman Capitals. In the Roman capitals, all horizontal strokes are light. All strokes sloping upward from left to right are light, except the middle stroke of Z. All strokes which slope downward from left to right and all vertical strokes except the verticals of N and the first vertical of M, are heavy.

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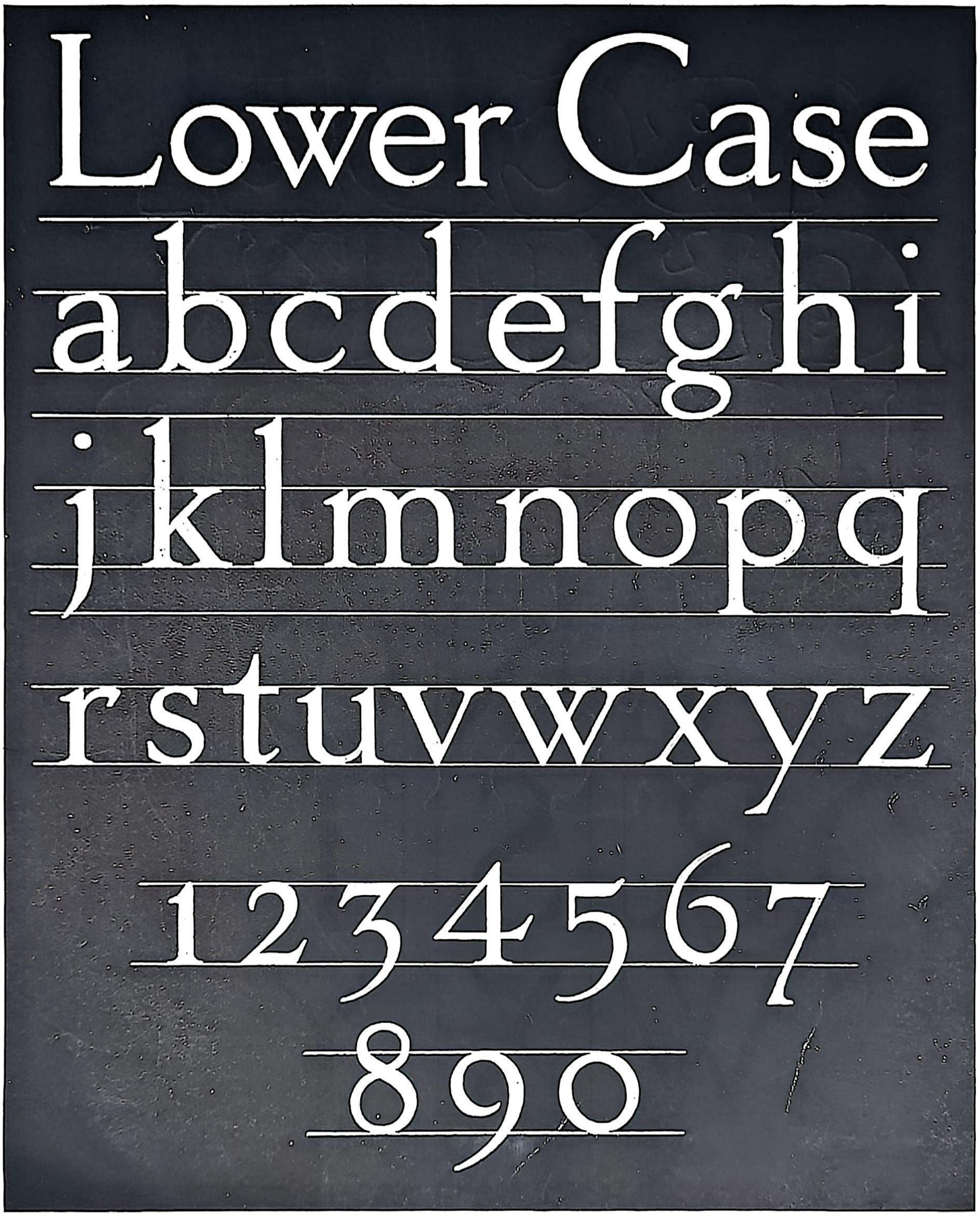

Commercial Design: Roman Small Letters and Numerals. Each line of small letters must be built on at least three guide lines: the base line, on which the letters rest, the waist line, marking the tops of the low letters, the capital line, giving the height of the capitals and the ascenders.

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Commercial Design: Heavy Capitals and Small Letters for Various Uses.

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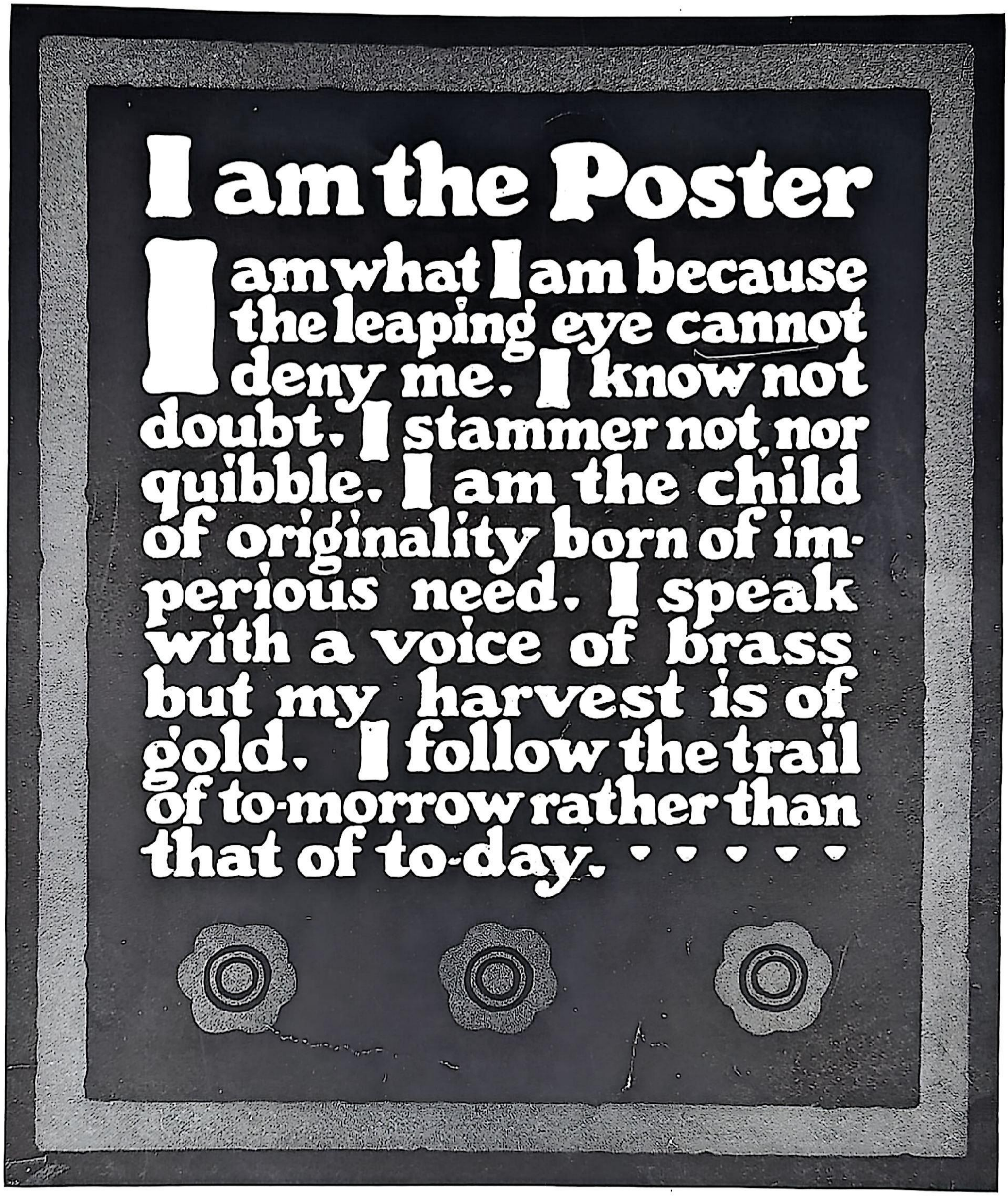
I am the Poster
I am what I am because the leaping eye cannot deny me. I know not doubt. I stammer not, nor quibble. I am the child of originality born of imperious need. I speak with a voice of brass but my harvest is of gold. I follow the trail of to-morrow rather than that of to-day. . . . . .

Commercial Design: An Example of Lettering, as Design. Letters are symbols with a definite meaning; but they are also elements of design. Fine lettering, like the above, makes an "all over" pattern, as though some unit of design had been carefully spaced and toned. The arrangement illustrated is a fine design, because it is well spaced, shows harmony of shapes and a balance of light and dark values.

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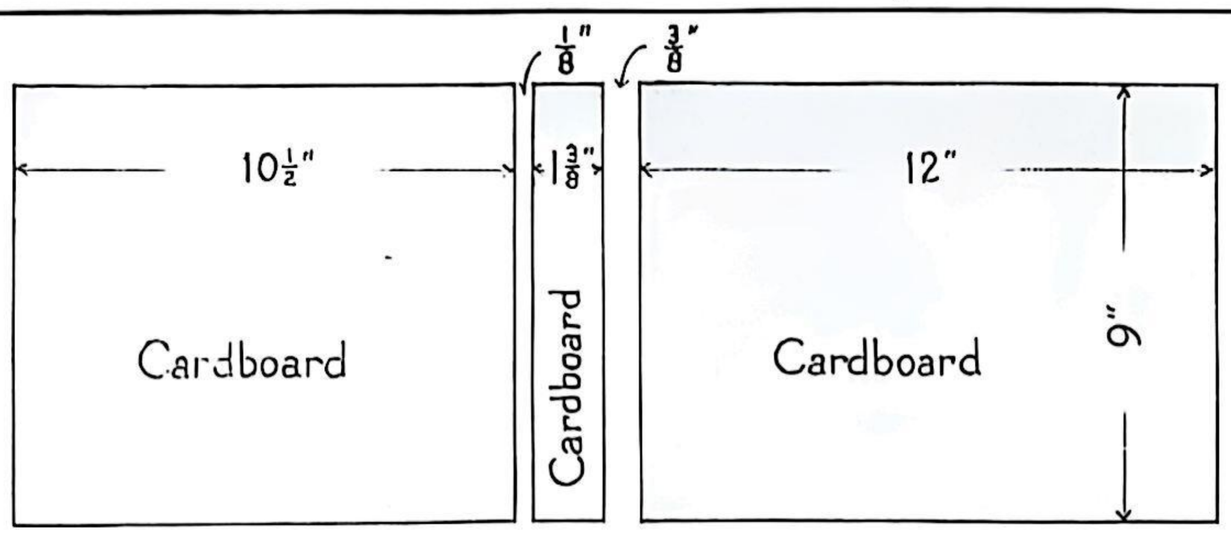
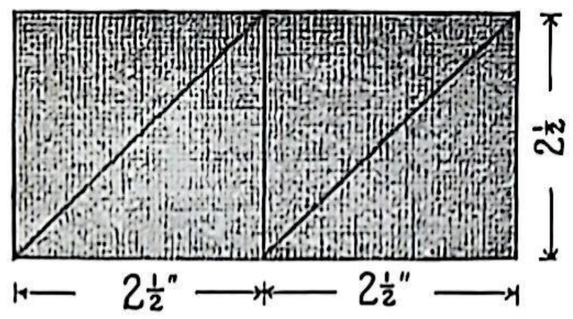
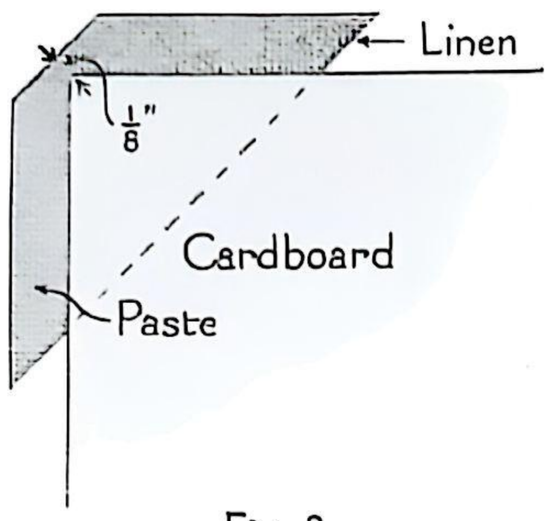


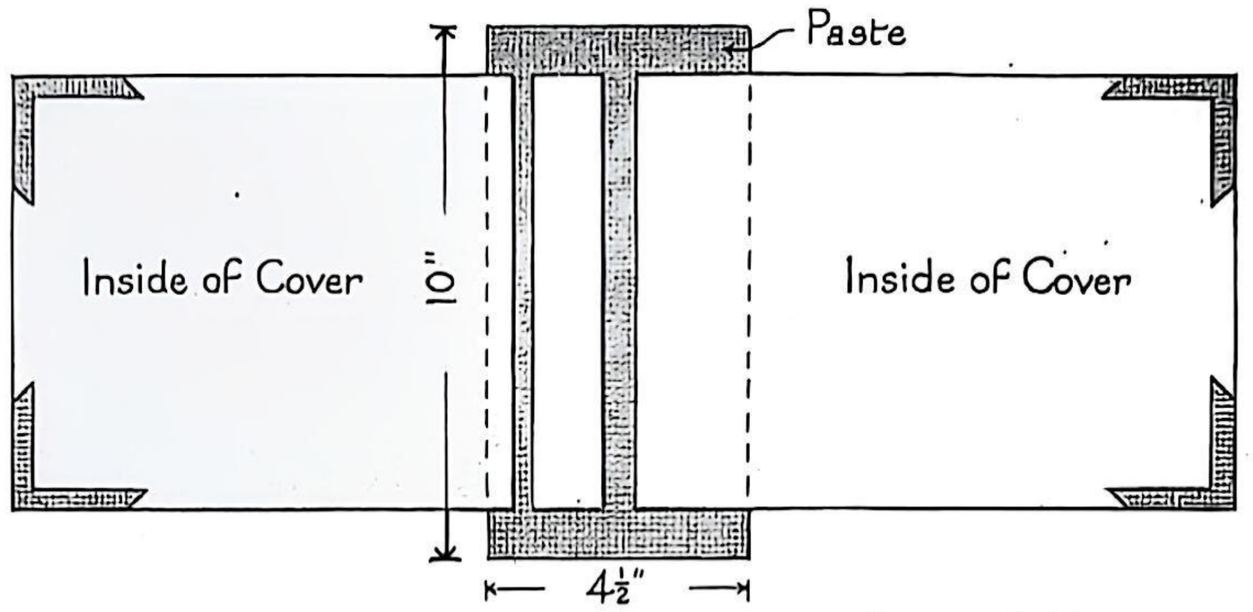
· Fig. 1 · Cardboards Cut and Spaced for Album



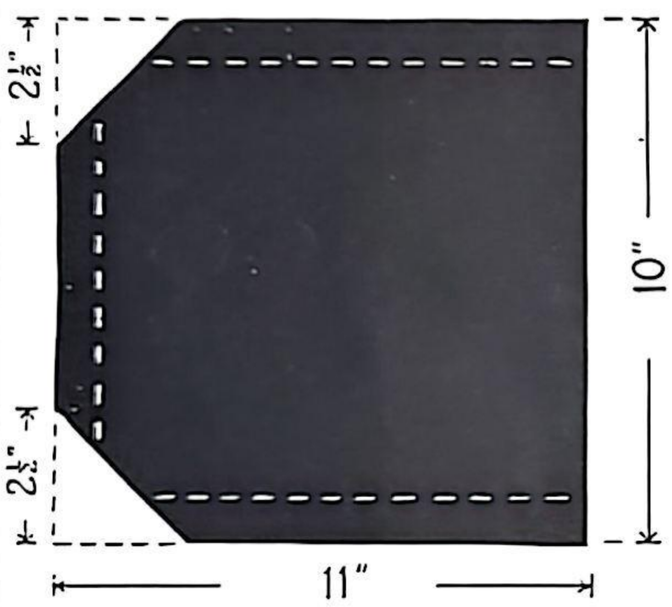
· Fig. 2 ·
Lay-out on Linen for Four Corners



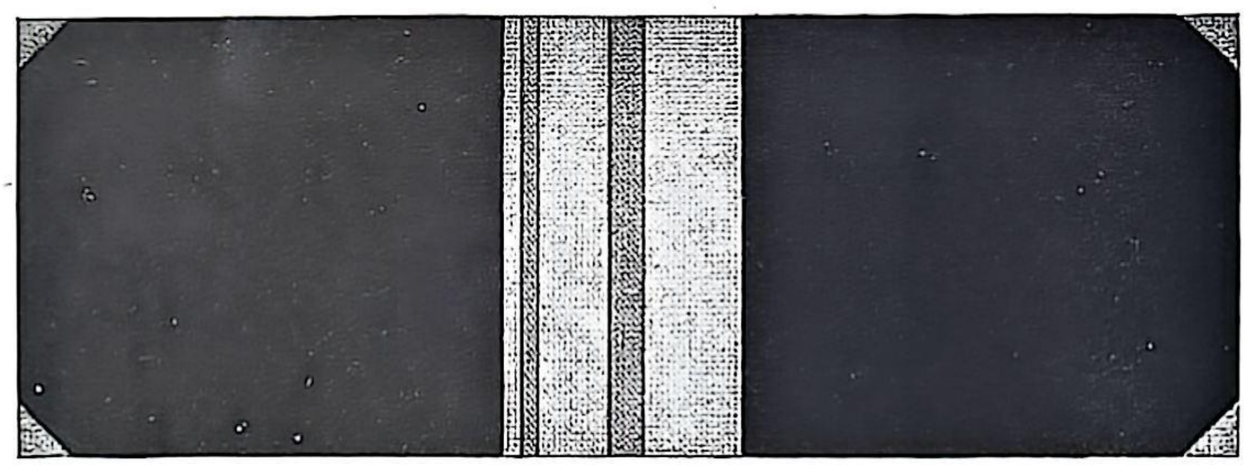
· Fig. 3 ·
Process of Mounting Corners



· Fig. 4 · Process of Mounting Hinge or Back of Album



· Fig. 5 ·
Black Paper Cut to Fit Cardboard
· Two of These ·



· Fig. 6 ·
Outside of Album Completed

Commercial Design: An Album for Poster Stamps. The black covered album or blank book illustrated on the next page is relieved from gloominess by the use of a poster stamp of gorgeous coloring as a decoration, and by the letters of the title, which are painted a bright yellow-green. All the steps in the construction of this book are shown in Figs. 1–6, on this page. Cardboard of the weight commonly used for mounting exhibitions of school work should be selected. A coarse linen, in natural color, which is "dressed" with glue to make it stiff and glossy is best for corners and hinge. This linen is known as bookbinders' crash.

The paste used in making books and book covers should contain glue. Library or flour paste is not sufficiently adhesive, when moist. When papers, linen, etc., are pasted to cardboard the work should be put under a press until the paste is dry. Attention to these details will add much to the professional appearance of the result.

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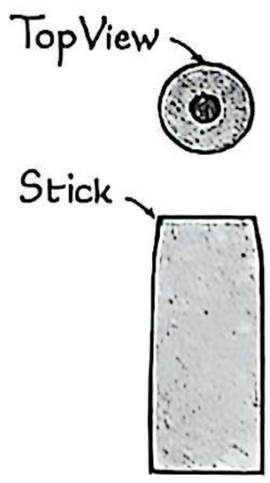
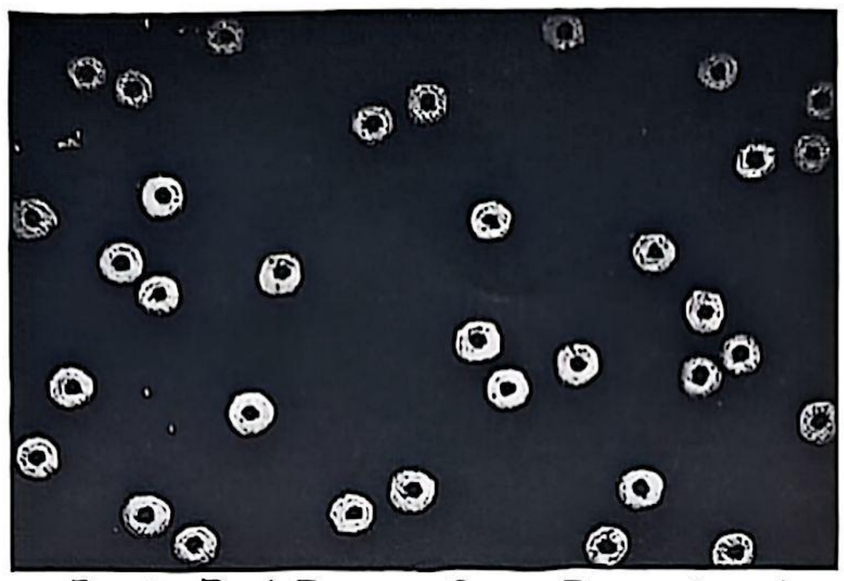
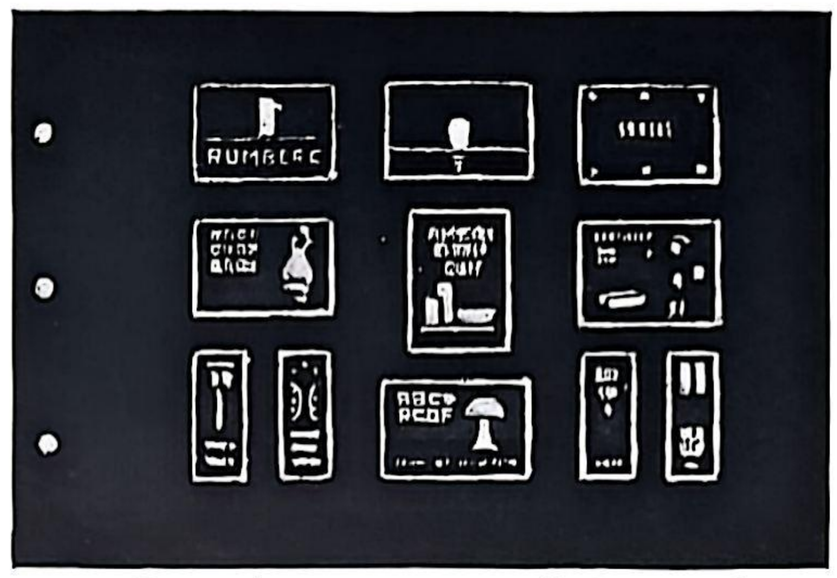


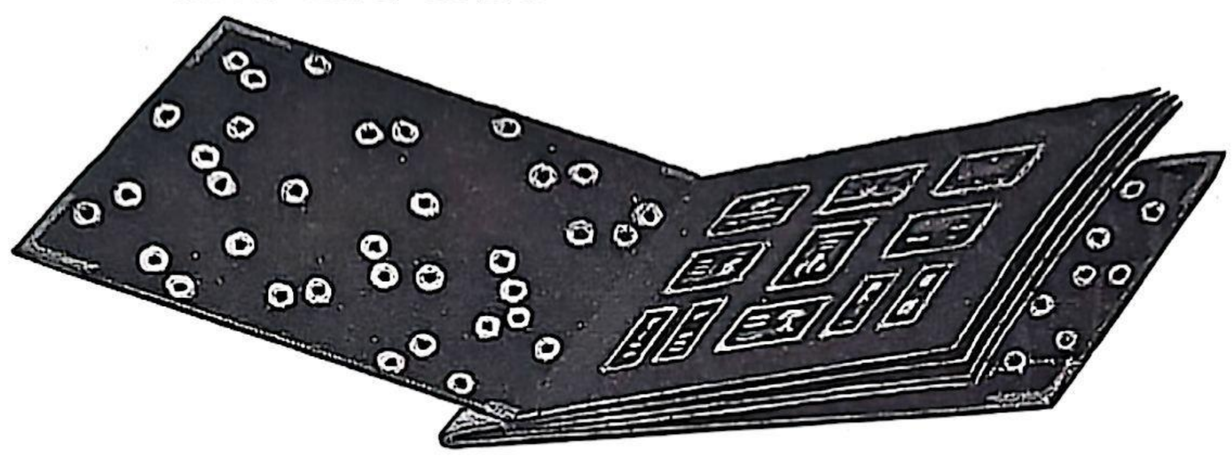
· Fig. 1 ·
Modified Cylindric Stick



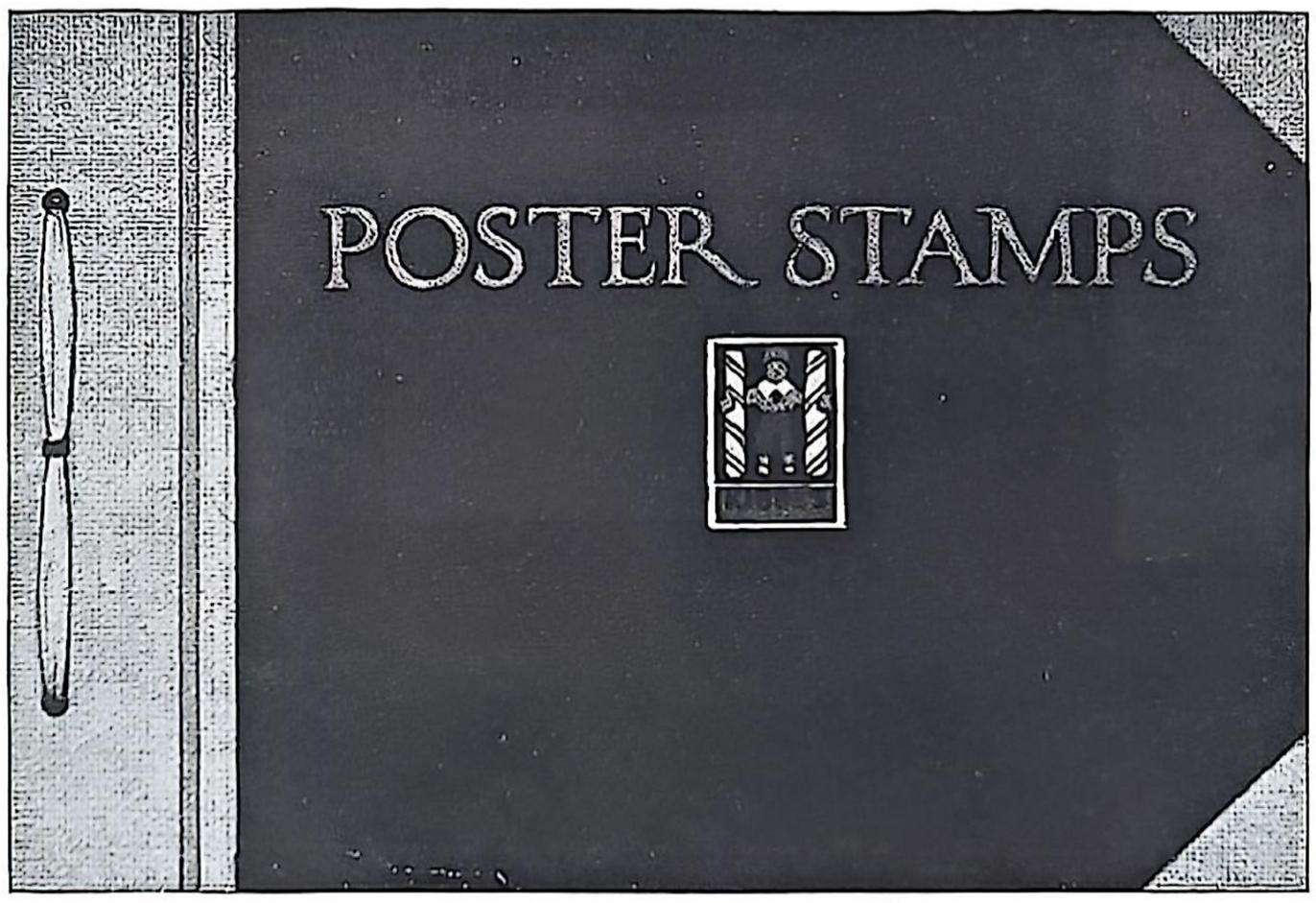
· Fig. 2 · End Papers Stick Printed with Show Card Colors



· Fig. 3 · Page Arrangement of Poster Stamps



· Fig. 4 · The Open Album



Design and Color: The Cover and End Papers of the Album. End papers of black were cut to fit the inside of each cover, leaving a scant quarter-inch margin on all sides, as shown in Fig. 4. Before these were pasted in place, they were printed in opaque water colors with a "modified" stick (Fig. 1). The color scheme used was the analogous group of yellow-orange, yellow and yellow-green. The leaves of the book were of black paper, cut a little smaller than the covers of the book, and held in place by gray tape, strung through holes punched in each leaf, and through the covers. Fig. 2 shows a number of poster stamps, carefully spaced and pasted on a page. Paper letters were cut, placed in position, traced, and filled in with yellow-green opaque water color.

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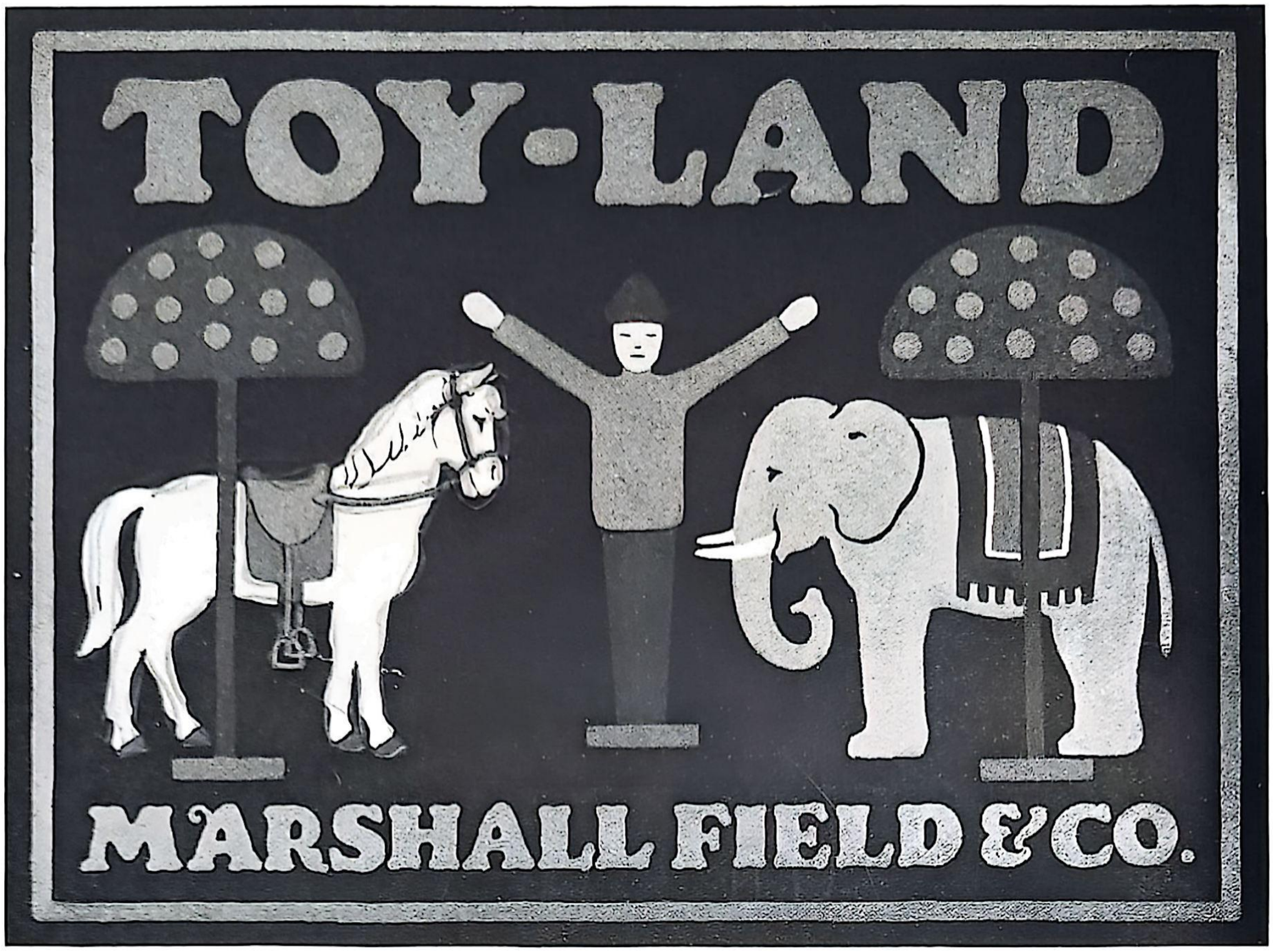

Color Scheme – The Split Complement: Blue Green, Red and Orange Distributed as follows:

1. Background – Black
2. Border, Elephant and Lower Line of Lettering – Light Gray
3. Horse – White
4. Toy-Land – Light Blue Green
5. Trees and Man's Legs Dark Blue Green
6. Man's Coat and Fruit on Trees – Orange
7. Saddle Cloth on Elephant and Trimmings on Horse – Red

Commercial Design: A Poster to Advertise Toys. A poster such as those shown on this page and on page 28 looks like a difficult problem; but when the steps in the making are unfolded, as in Figs. 1 and 2, on page 27, all the difficulties disappear. A large sheet of black paper (22″ x 28″) was selected for the background. The first step was the drawing of a marginal band about one-quarter inch wide, nearly one-half inch in from all edges. This band was filled in with light gray. Then the "legend" or text of the poster was decided upon, and the letters in the word "Toyland" were cut, spaced and traced near the upper marginal band. Several shapes of toys were then cut, and a balanced arrangement made, using the horse and elephant shapes, balanced on either side of the symmetrical man shape. This arrangement was now traced. As the background spaces needed filling, a tree-shape was added on either side, first in paper, then as a traced shape. Then the lower line of lettering was cut, spaced and traced. All shapes were then filled in with opaque water colors in the color scheme of the split complement blue-green, red and orange. This scheme, combined with black, white and gray, as indicated above, was most effective.

The student should develop one of the designs given, and then work out, in similar manner, a poster design of his own, which might be used by a local merchant.

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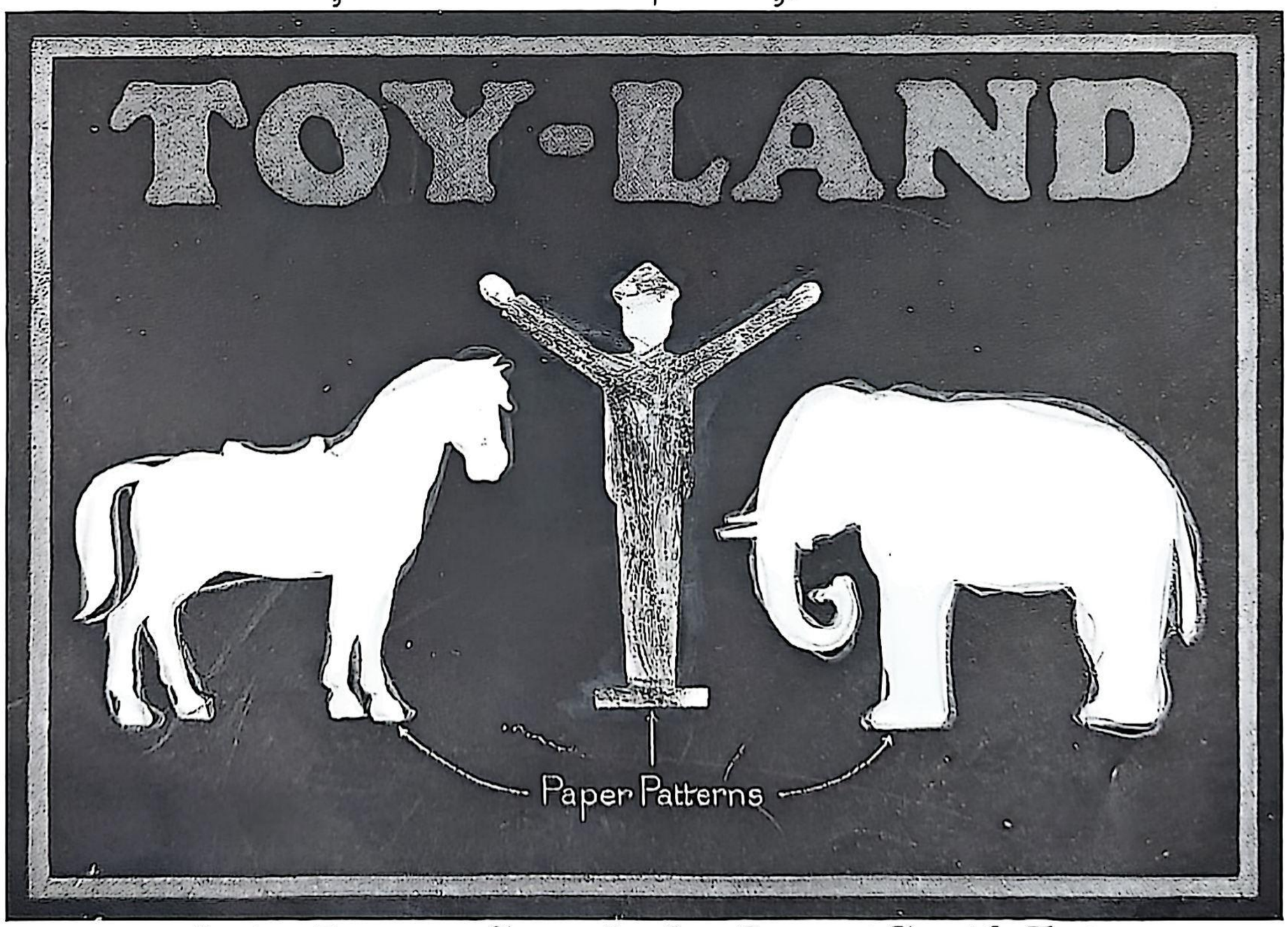
· Fig. 1 · 20×27" Black Paper Background for Poster



· Fig. 2 · Decorative Shapes Cut from Paper and Placed for Tracing

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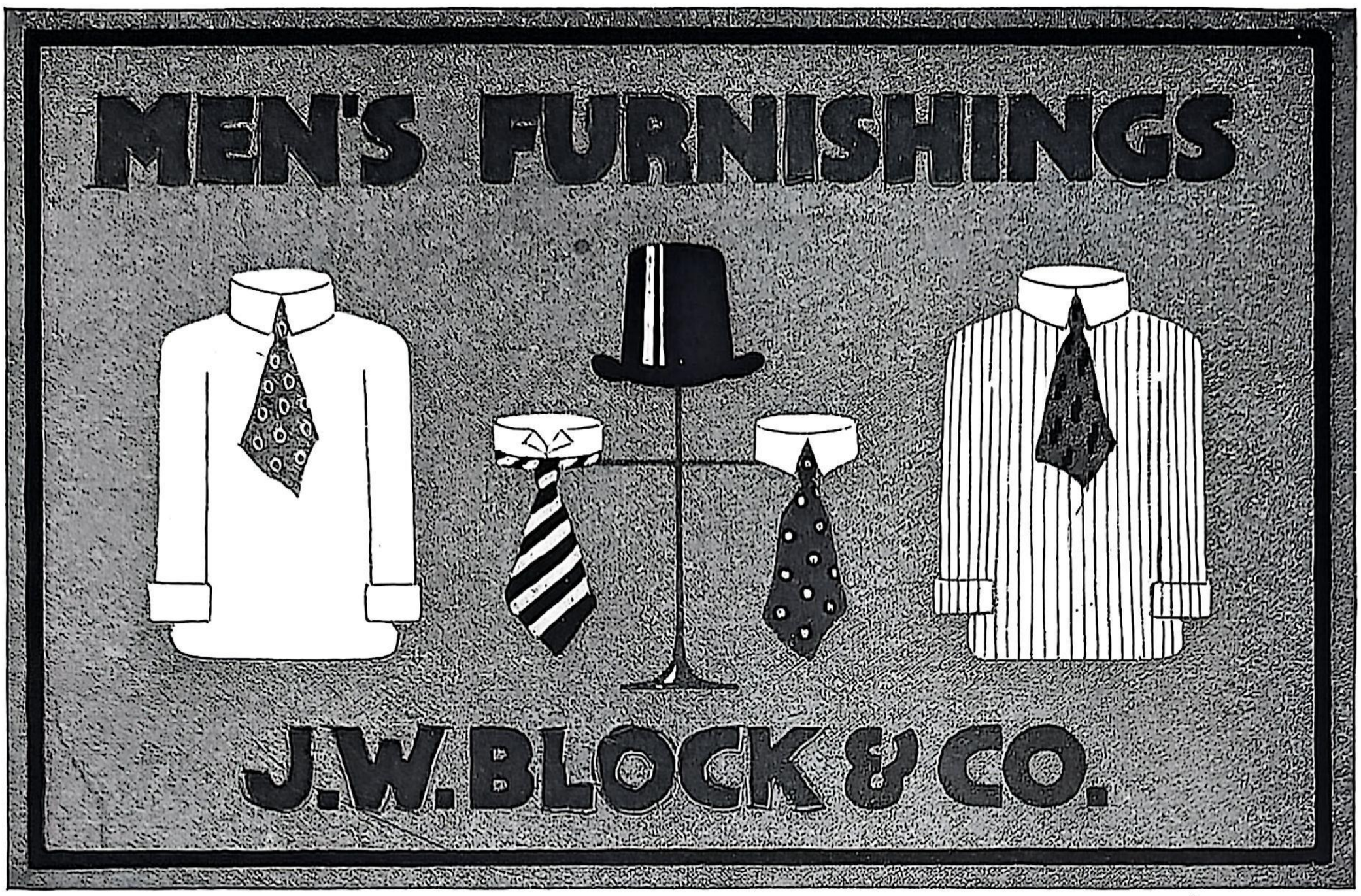

Commercial Design: Suggestions for Posters.

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CHAPTER III

COSTUME DESIGN

Suggestions to Teachers

Ruskin's Comment on Dress: "That dress is right which is beautiful in the eyes of noble and wise persons. Right dress is therefore that which is fit for the station in life and the work to be done in it, and which is otherwise graceful, healthful and easy; on occasion, splendid; always as beautiful as possible.

Beautiful dress is chiefly beautiful in color, in harmony of parts and in mode of putting on and wearing. Rightness of mind is in nothing more shown than in the mode of wearing simple dress. Ornamentation, involving design, such as embroidery, etc., produced solely by industry of hand, is highly desirable in the state dress of all classes, down to the lowest peasantry."*

American Standards of Dress: American people are frequently criticized for their lack of taste in the selection and use of beautiful things. It is said that we, as a nation, are "poor dressers." We do not display that innate sense of the fitness of costume to occasion which some nations, notably the French, seem to possess. Possibly the methods of art instruction which have prevailed in our schools up to the present time are largely responsible for this. Instead of teaching definitely the principles of design and of color harmony that relate to dress, to house furnishing and to other practical problems of life, we have emphasized pictorial art and have laid stress on pencil rendering, water color handling and other mere processes of technique.

The Grammar of Color: It is possible for us to teach the grammar of color just as definitely as we teach the grammar of language, so that those who are not born with a natural sense of color harmony can acquire a knowledge of it through color analysis. We see hundreds of people every day who are combining colors ungrammatically. Those who would blush to find themselves saying "He has went" or "I done it" in their combinations of words are constantly guilty of just as great errors in their combinations of colors. The time will soon come when the educated man or woman will be judged by choices of color as definitely as he or she is now judged by choices of speech.

Costumes as Problems in Design: A plan or idea for a dress must be judged by the same standards and controlled by the same principles that govern other designs. The lines of the costume should be structural; that is, they should be rhythmically harmonious with the lines of the figure. The human figure is built upon a symmetrical adjustment of parts on either side of a vertical axis. The vertical line is, therefore, the controlling line. When we see in a gown a confusion of lines, as in large plaids, we know that the principles of structural design have been transgressed.

Color in Costumes: In developing the lessons which follow in this chapter, the choices of color combinations should be made from the various schemes already developed from the color chart. All that the pupil knows about color can be utilized in costume design. When to use grayed color, when to use an intense note of color, where to distribute white and black accents, when to use sharp contrasts of color values and when to keep value relationships subtle, all will be points that will inevitably present themselves for discussion.

*From "Arrows of the Chase"—By John Ruskin.

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· Fig. 1 ·
Fashion Plate Cut Out
and the Shape Traced

· Fig. 2 ·
The Shape Traced
on White Paper

Costume Design: Fashion Plate Figures. From a current fashion plate choose a costume whose lines are in structural harmony with the human figure. Cut out the figure and trace its shape on white drawing paper (Fig. 2). Cut from the printed figure the head, hands and feet. Paste these parts in place on the traced figure. Heretofore, we have cut from colored papers the main shapes of gown, hat, etc. We are now to draw upon the traced figure all lines and shapes relating to the costume, filling in the shapes with opaque water color.

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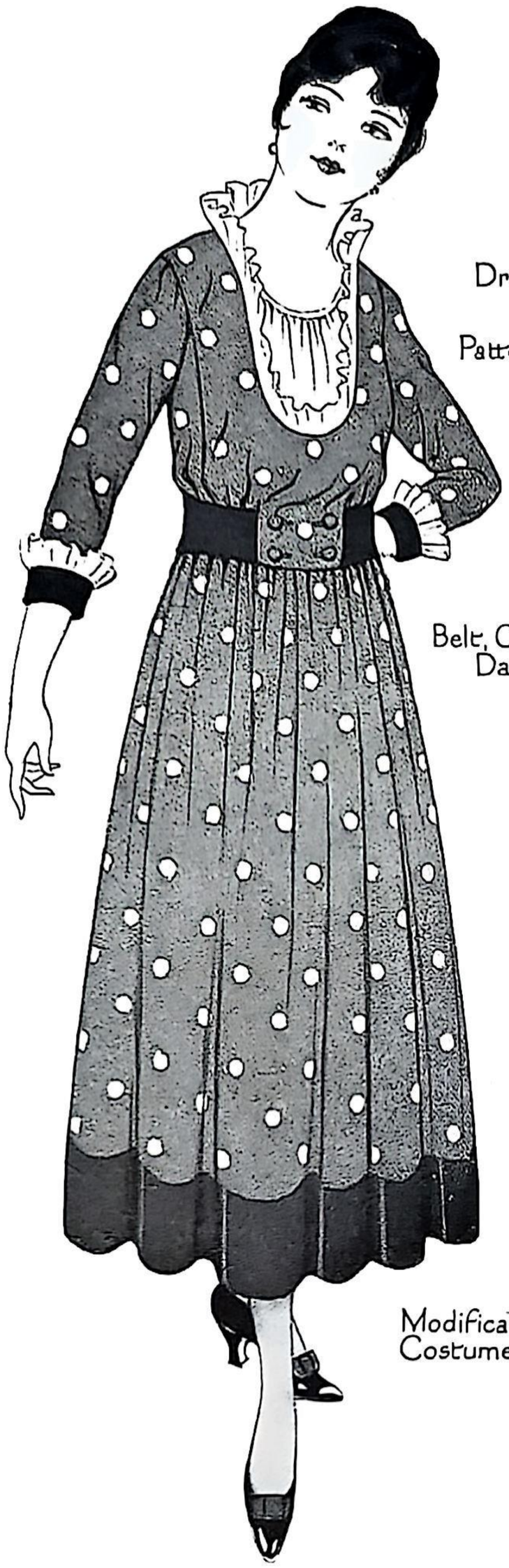
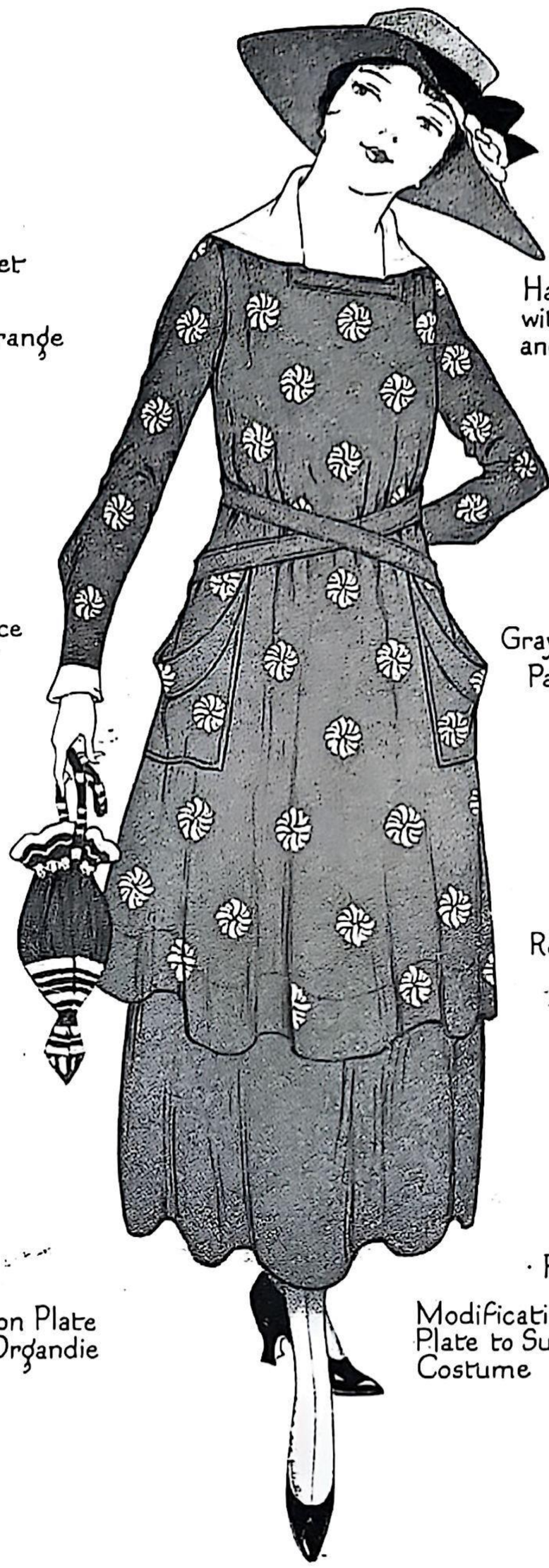


Dress – Blue Violet Organdie
Pattern – Yellow Orange

Belt, Cuffs and Flounce
Dark Blue Violet

· Fig. 3 ·
Modification of Fashion Plate Costume to Suggest Organdie



Hat – Gray Red with Black Band and White Flower

Dress –
Gray Green Muslin
Pattern – White

Bag –
Red and White

· Fig. 4 ·
Modification of Fashion Plate to Suggest Street Costume

Costume Design: Dress Designs Expressed Through Water Color Painting. The two designs above were made upon two different tracings of the same figure. Duplicate fashion sheets were obtained, so that there might be duplicates of the head, hands and feet. The hat in Fig. 4 was drawn and painted with opaque water colors. All the lines and parts of the costume were sketched on the traced figure and carefully corrected. Then the shapes were filled with opaque water color, in the schemes indicated.

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Costume Design: Designs for Sport Costumes. These figures were first traced on gray paper from cut out fashion plate figures. Heads, hands and feet were then cut from the printed figures and pasted in place on the traced figures. Then the different parts of the costume were designed in pencil and filled in with opaque color. When the color washes were dry, the various lines suggesting drapery, the figure outlines and the accents were drawn with a sharp pencil point.

All color schemes used should be taken from analysis of the color chart. White, black and gray are harmonious with all color combinations.

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Costume Design: Designs for Street Costumes. Almost any costume, like any other design, is improved by the judicious use of white. A background of gray paper enables us to use washes of white opaque color for furs, sweaters, shoes, collars, gloves, etc. Note the velvety quality of the black, on hats and trimmings. Opaque water color, in any color tone, possesses, when dry, this peculiar surface. It is well adapted to effects we desire to secure in designing costumes.

You will need a small brush—No. 3—for putting narrow bands and small shapes of color on the painted costume.

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Costume Design: A Poster to Advertise Furs. Any merchant who deals in furs or costumes will appreciate a poster like this. Observe how successfully the texture of gray velvet is expressed by gray opaque color. Use an original costume design, in developing a poster to advertise a sale of coats, dresses, shoes or furs.

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CHAPTER IV

INTERIOR DECORATION

Suggestions to Teachers

The Principles of Art Applied to Practical Problems: There is no human being without some ideal of beauty, however far below the established standard this ideal may fall. Every one enjoys what to him is beautiful. The more one feeds his craving for beauty on what is sincere and real, the greater will be the development of ability to appreciate what is good. In the schools, we are seeking to elevate standards of taste by presenting art study in a new light; not as representation, or picture making, but as the expression of man's joy in his work. This expression may be in terms of wood and concrete; it may be by means of the needle and cloth; it may be in forms of metal; in shapes of glass; in arrangements of spaces on a wall; in furniture and furnishings, and even in cooking and in common household labor.

The Planning of a Room Interior: There are few people who do not, at some time in their lives, assist in the planning and furnishing of a home. Fortunate, indeed, are those who, possessing the requisite knowledge for meeting such a problem, are given the opportunity to put theories into practice. While comparatively few can do this in actuality—for most of us live in houses that other people have planned—still it is a good thing for all to do this on paper, planning a house or a room in miniature, as has been done in the previous books of this series, and deciding every question that can possibly arise, concerning the size, proportion and arrangement of wall spaces, and the disposition of furniture.

The Side Walls of a Room: In the problems presented in this chapter, we are to decide upon an adequate and beautiful proportion for a wall of a room. Having done this, we are to settle many other questions: Where are the doors to be located? Are they to be inside or outside doors, and how many of each? How many windows are there to be? Where shall the wall openings be placed, so that there shall be sufficient room for the necessary furniture? These are some of the points which must be discussed in the lessons that we classify under the head of Interior Decoration.

Drawing to Scale: Require the pupils to measure on wall of an ordinary room at home, setting down all measurements carefully. A free-hand, dimensioned rectangle should be brought to school as a result of this measuring. In these first steps it is assumed that the students understand what is meant by drawing to scale. There are two devices which may be employed in developing scale drawings: either the use of squared paper, (twelve squares to the inch is a convenient division) or the use of a scaled ruler. A number of exercises in measuring walls, windows and doors, and reducing them to scale, should be given before the problem of the wall plan is attempted.

Materials Used in Making Wall Plans: Preliminary sketches should be made on white drawing paper, and transferred, or the students may work directly on mounted water color paper. T squares and triangles will greatly aid the ease and accuracy with which the work is done, although successful results have been accomplished merely by the use of a ruler and the square corner of an envelope. Transparent water color washes are used to indicate color schemes. The great secret of success in applying color washes is to keep them in very light tints.

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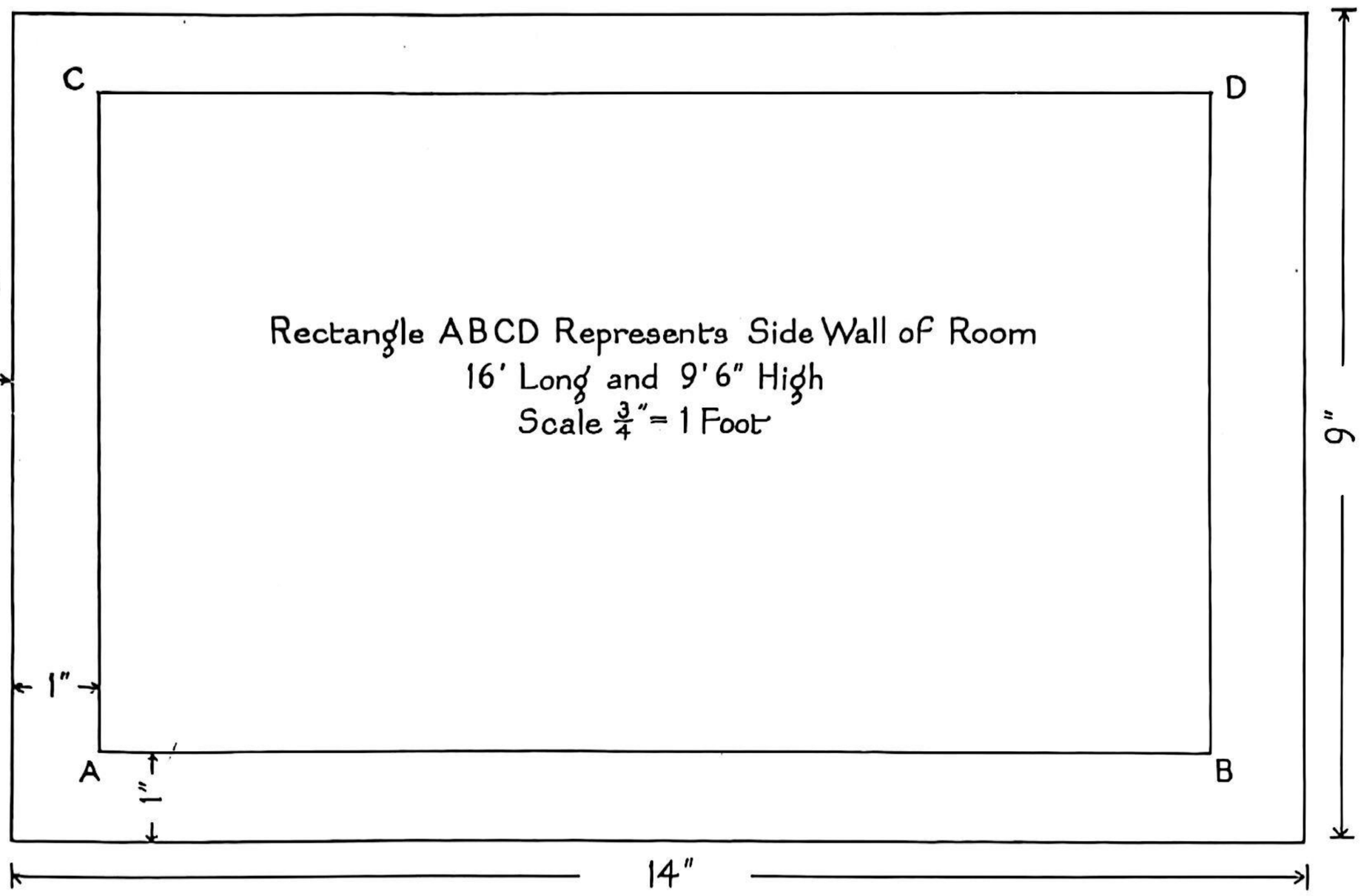
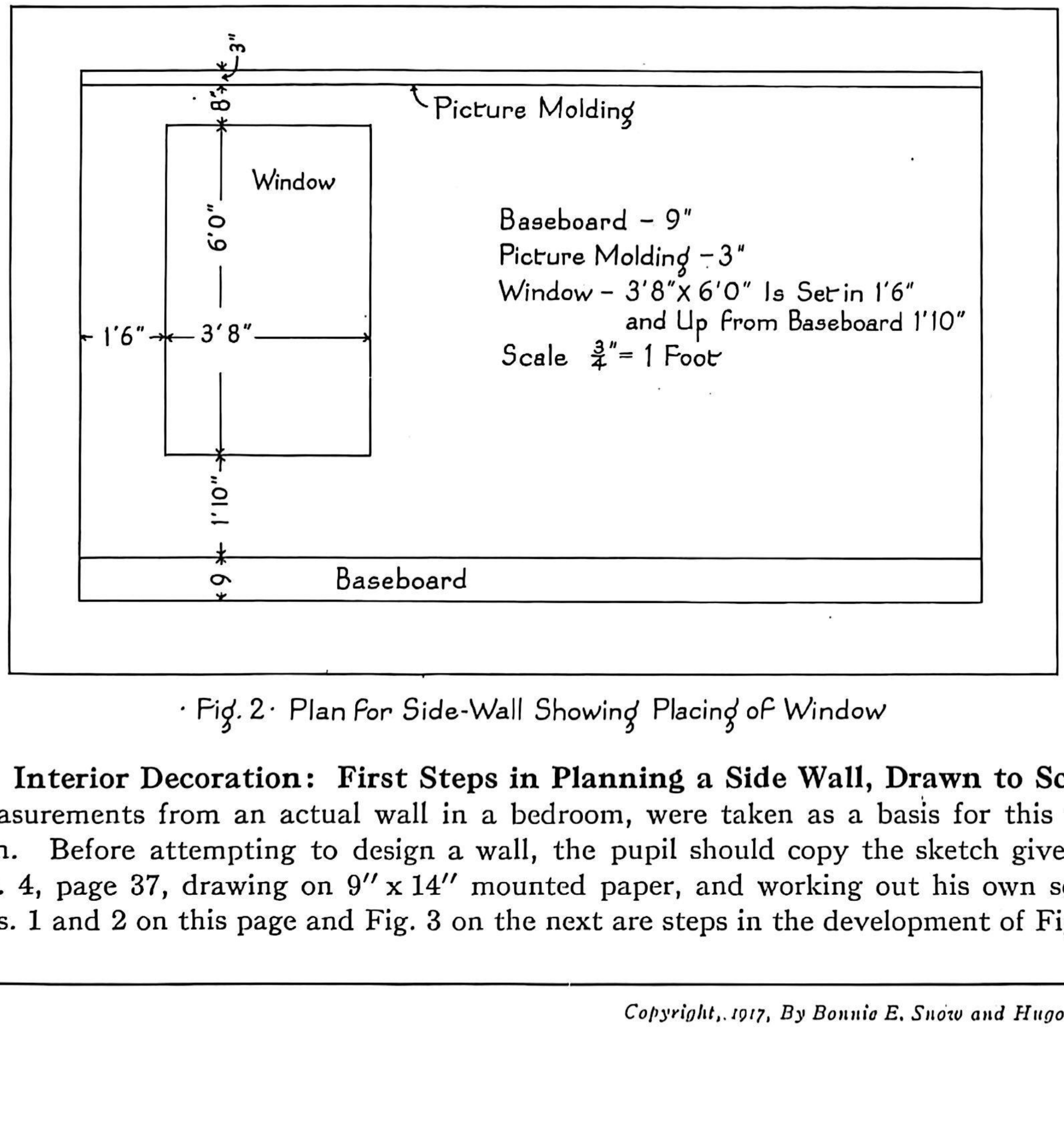


· Fig. 1 · 9 x 14" Water Color Board Showing Plan of Side-Wall of Room



· Fig. 2 · Plan for Side-Wall Showing Placing of Window

Interior Decoration: First Steps in Planning a Side Wall, Drawn to Scale. Measurements from an actual wall in a bedroom, were taken as a basis for this wall plan. Before attempting to design a wall, the pupil should copy the sketch given in Fig. 4, page 37, drawing on 9" x 14" mounted paper, and working out his own scale. Figs. 1 and 2 on this page and Fig. 3 on the next are steps in the development of Fig. 4.

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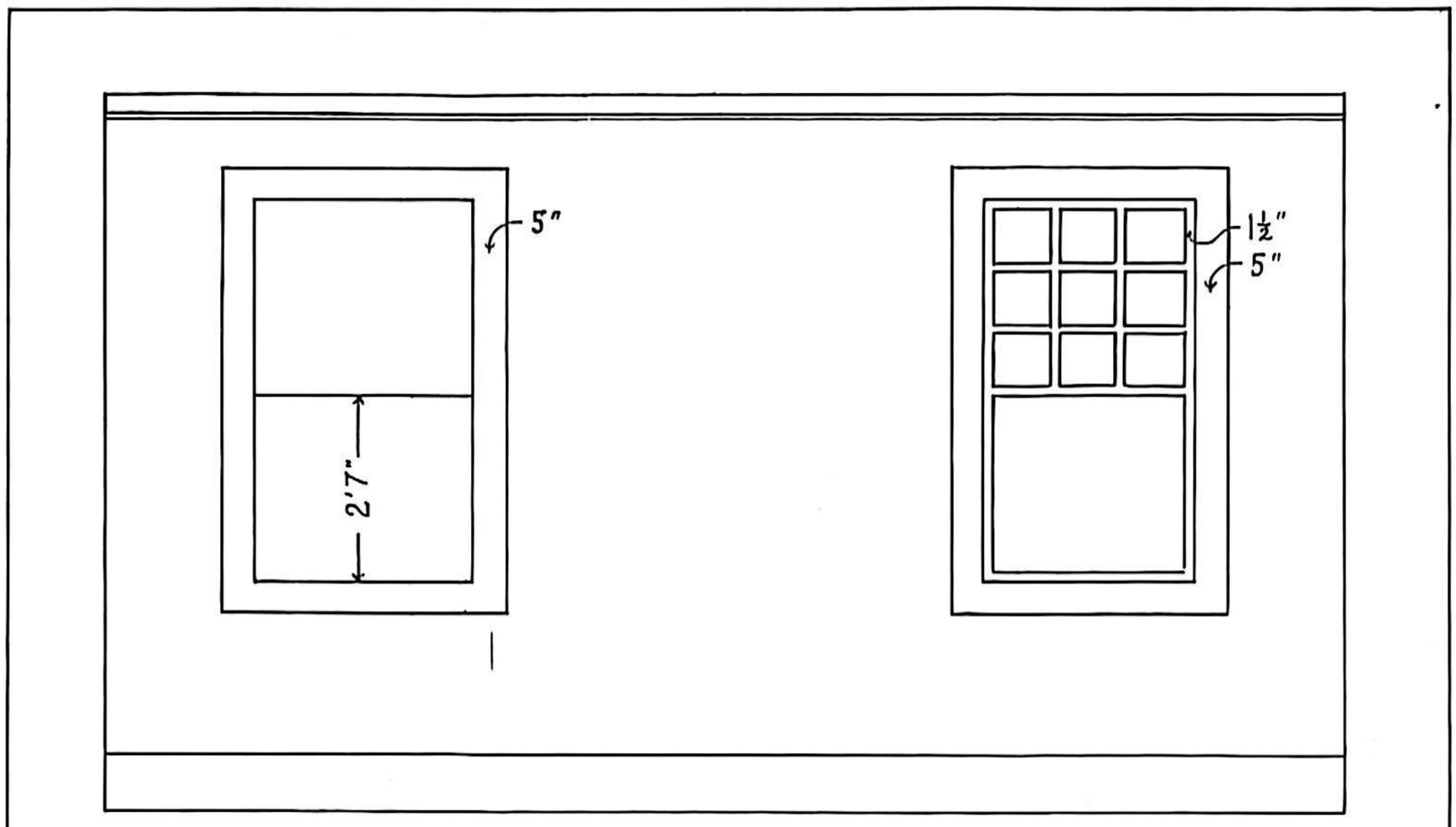
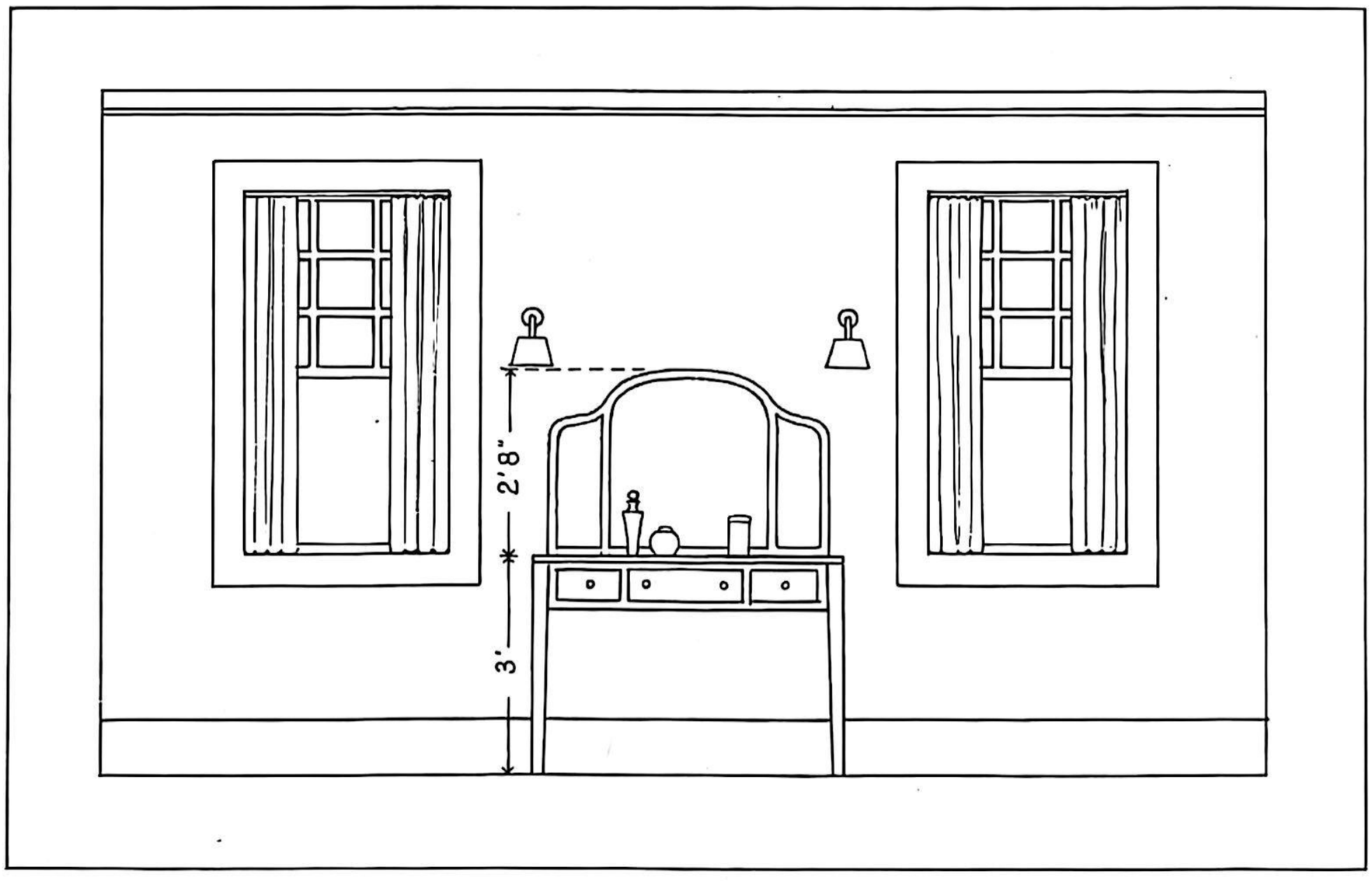


· Fig. 3 · Plan of Side-Wall Showing Details of Windows



· Fig. 4 · Finished Outline of Plan for Side-Wall

Interior Decoration: Development of a Plan for a Side Wall. These sketches are mechanical drawings. Use a T square and triangle, or a ruler and the square corner of an envelope to aid in accuracy. Your ruler should have inch, half, quarter, eighth and sixteenth inch divisions. Keep your pencil sharp and make your lines light.

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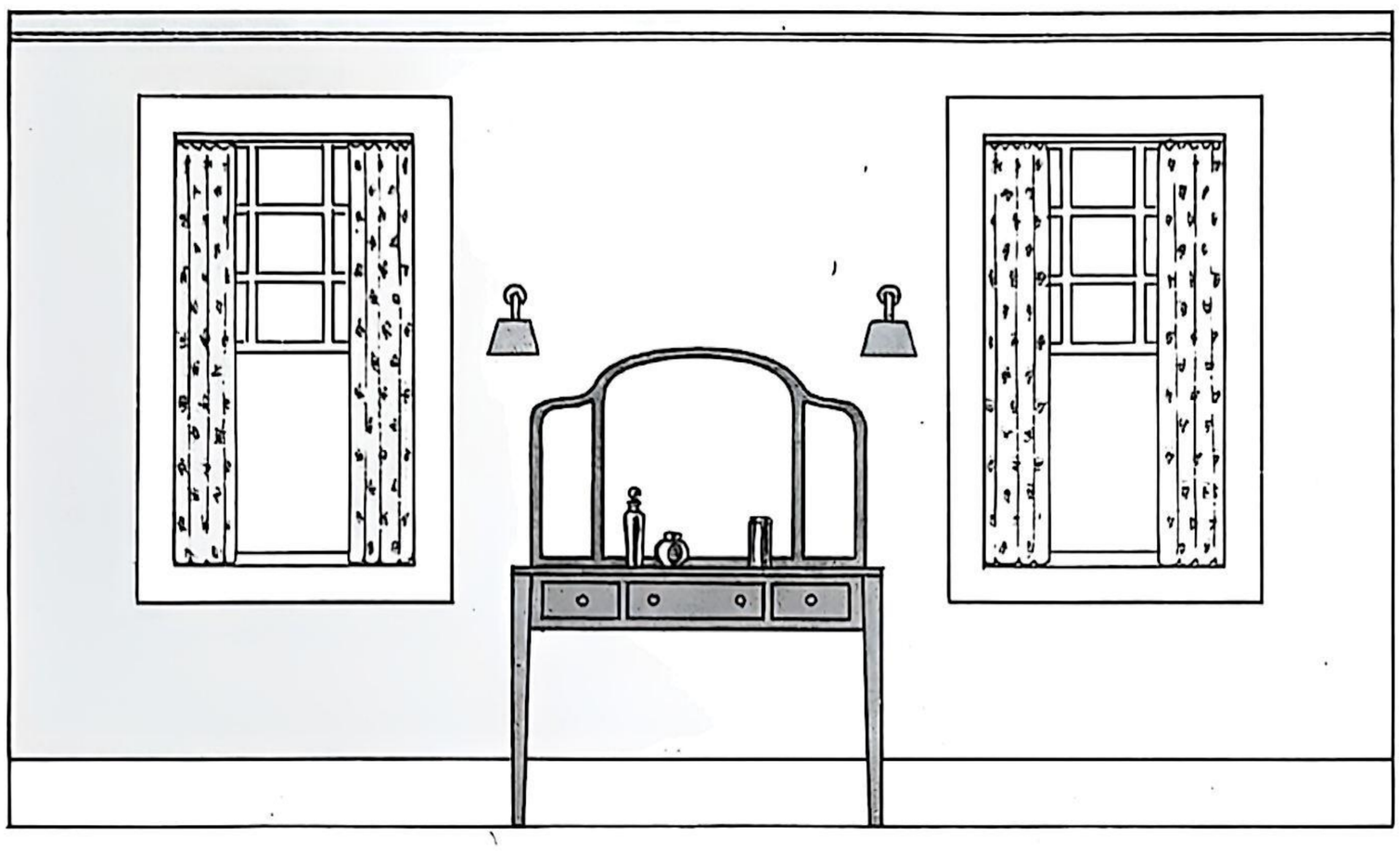

Wall: Light Gray Yellow Orange

Lights: Orange

Trim: White

Curtains: Light Gray Orange Background with Flowered Design

Toilet Bottles: Intense Red-Orange and Green

Dresser: Dark Gray Orange

· Fig. 5 · Water Color Washes Added to Side-Wall

Wall: Light Gray Orange

Trim: White

Curtains: Gray Orange

Table: Dark Gray Orange

Lamp: Dark Blue with Intense Green Shade

Books: Orange Green and Blue

· Fig. 6 · Design for a Library

Interior Decoration: The Finished Wall Plan and a Variation. On a separate sheet of white paper, try making washes of light gray yellow-orange, light orange and dark gray orange, using transparent water colors. Orange is grayed by adding a very little blue. Wash the wall spaces first. You can hardly use too light a tint. Keep the trim white. Then wash in the curtains and the lights. Last, wash in the dressing table. Line in all outlines with a clear, sharp pencil line.

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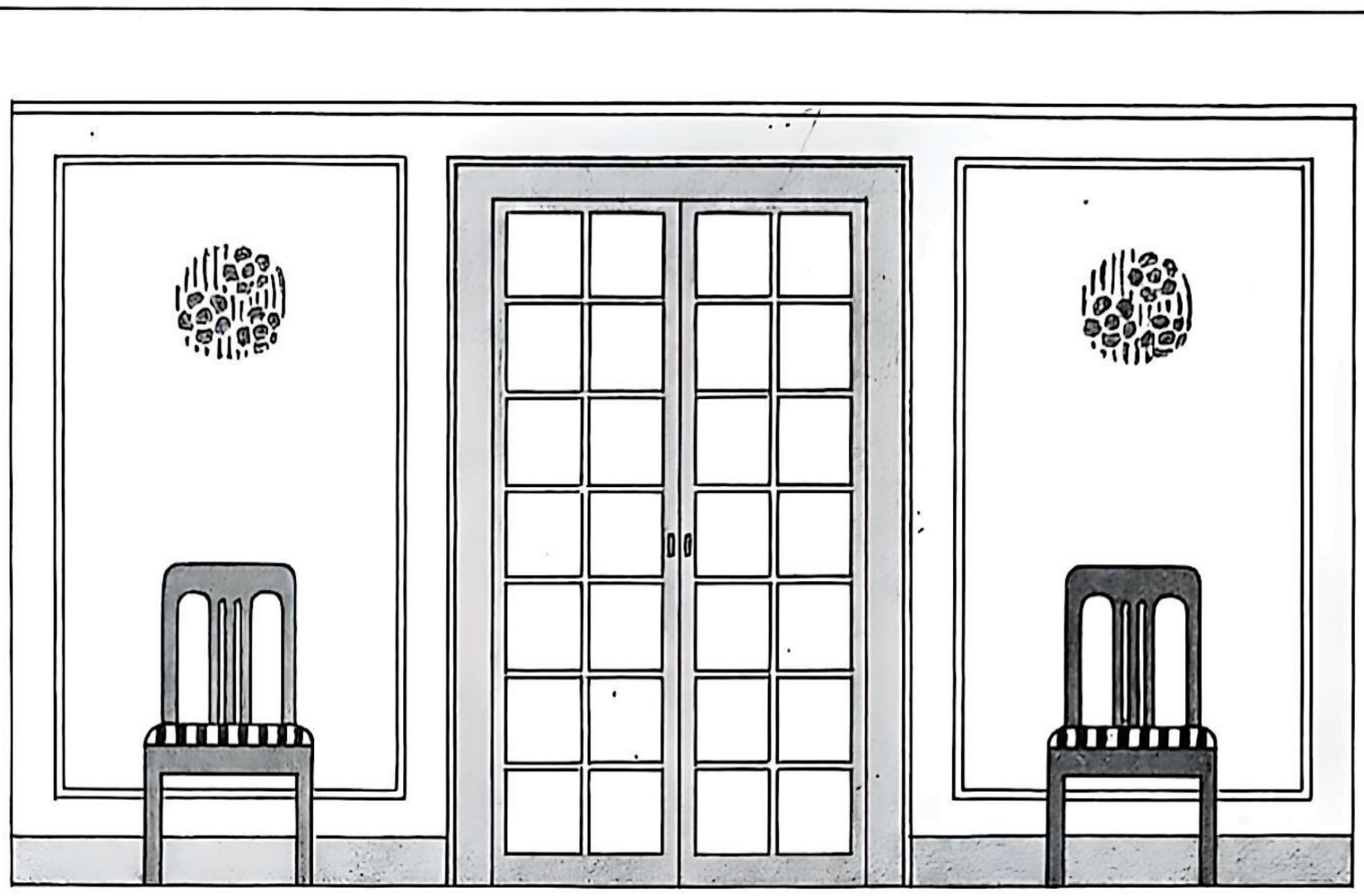
Wall: Light Gray Yellow Orange

Trim: Gray Blue Violet

Chairs: Dark Yellow Orange

Upholstery: Bright Blue Violet and Yellow Orange

Decoration: Bright Blue Violet and Yellow Orange



· Fig. 7 · Design for a Reception Room

Wall: Light Gray Blue

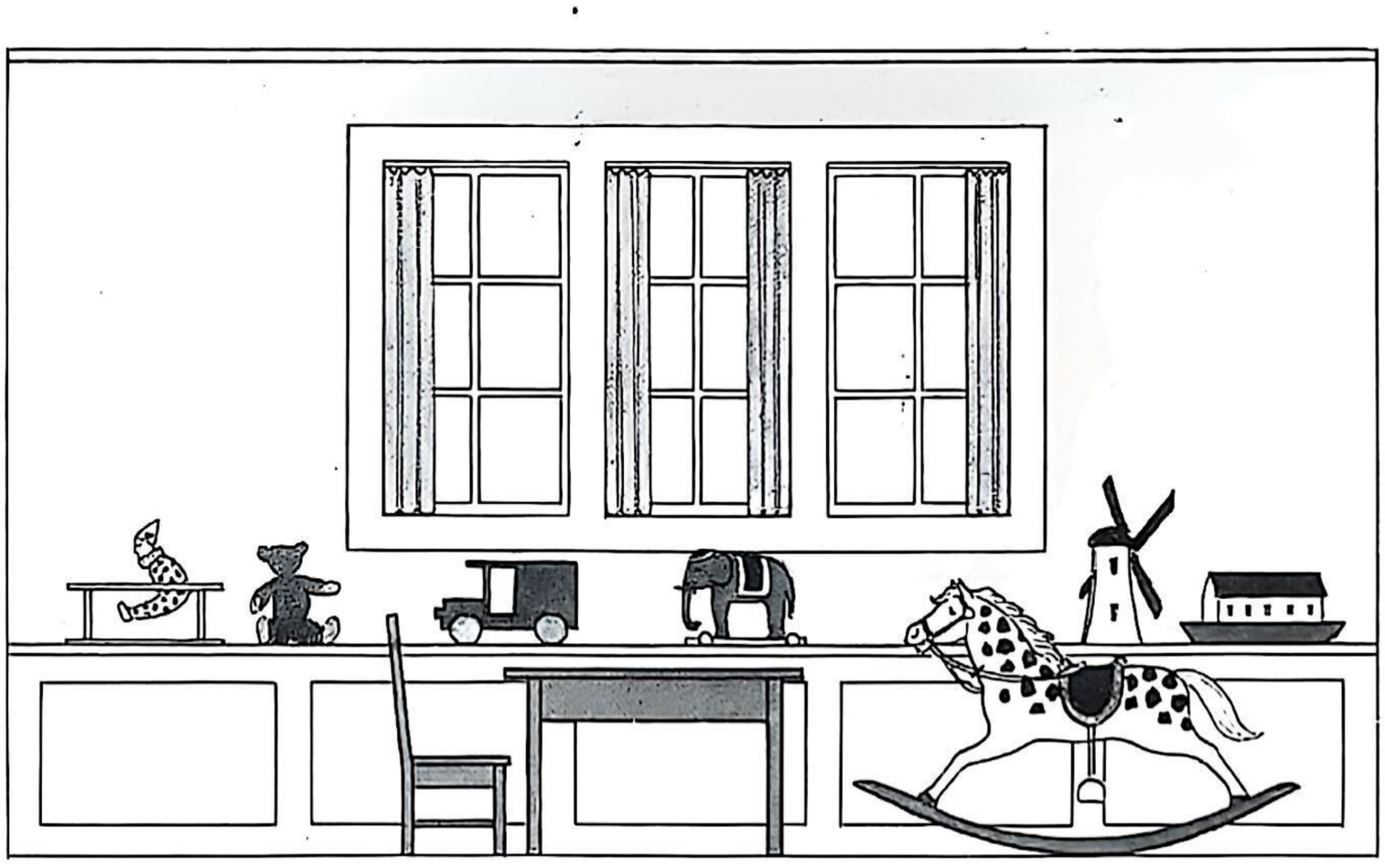
Shelf and Window Casing: White

Curtains: Gray Blue

Table and Chair: Dark Gray Orange

Rocking Horse: White with Orange Spots Rockers: Green

Toys: White, Yellow, Orange Red, Blue and Bright Green



· Fig. 8 · Design for Child's Play Room

Interior Decoration: Other Variations of the Wall Plan. Fig. 6 on page 38 shows another treatment of wall developed in Figs. 1 to 5. The design suggests a library. Two other ideas are expressed on this page: a wall for a reception room, and a wall for a child's play room. Work out one of these ideas, using the dimensions given in Fig. 1. Then, with the same dimensions, plan and carry out in color, a wall plan of your own.

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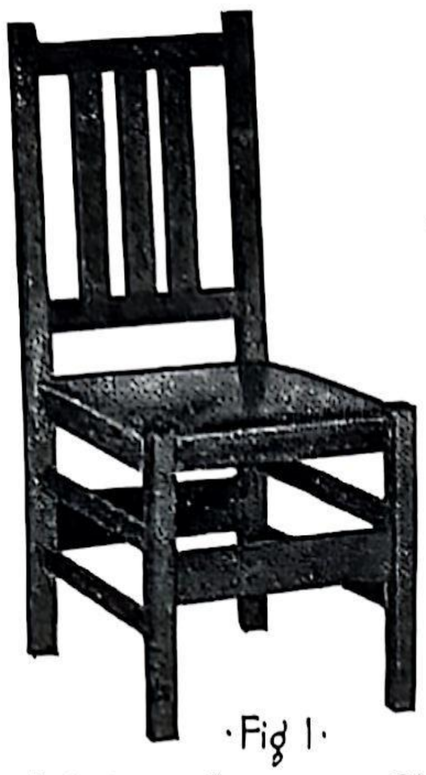
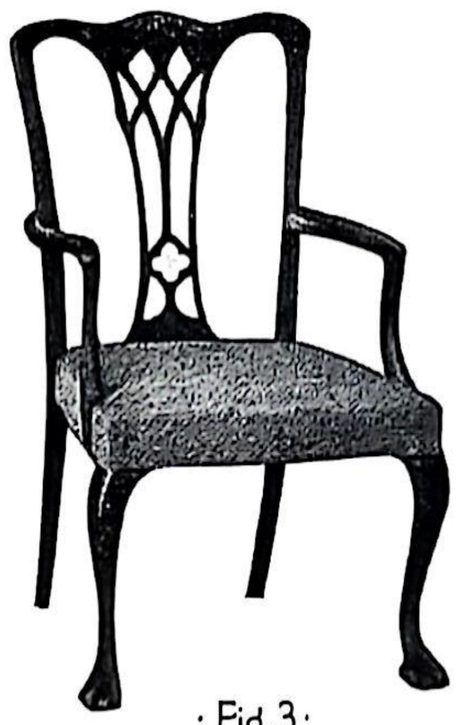


·Fig 1·
Modern American Chair

·Fig.2·
Queen Anne Chair



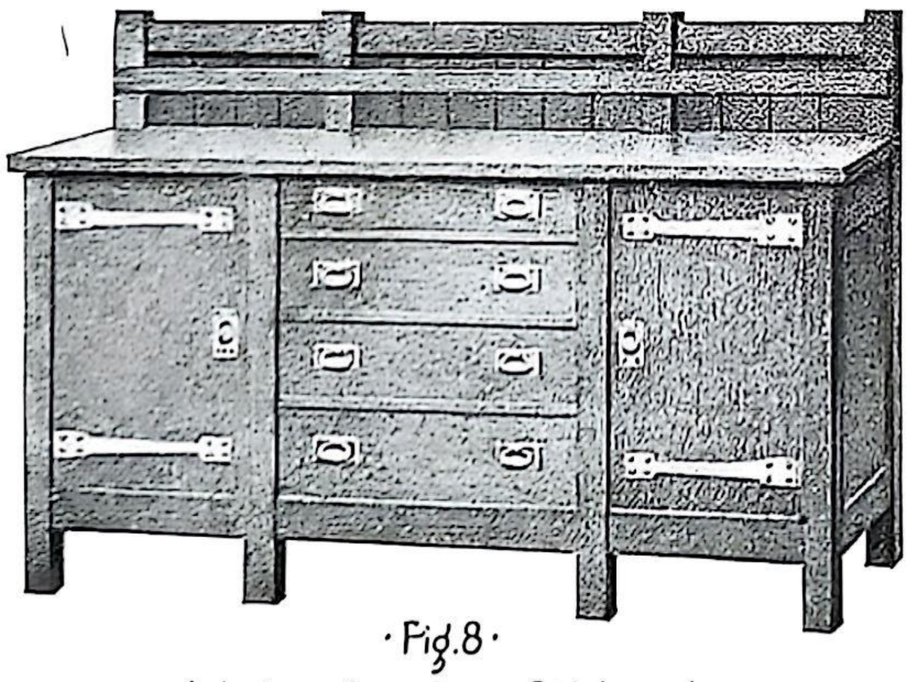
·Fig.3·
Chippendale Chair

·Fig.4·
Windsor Chair

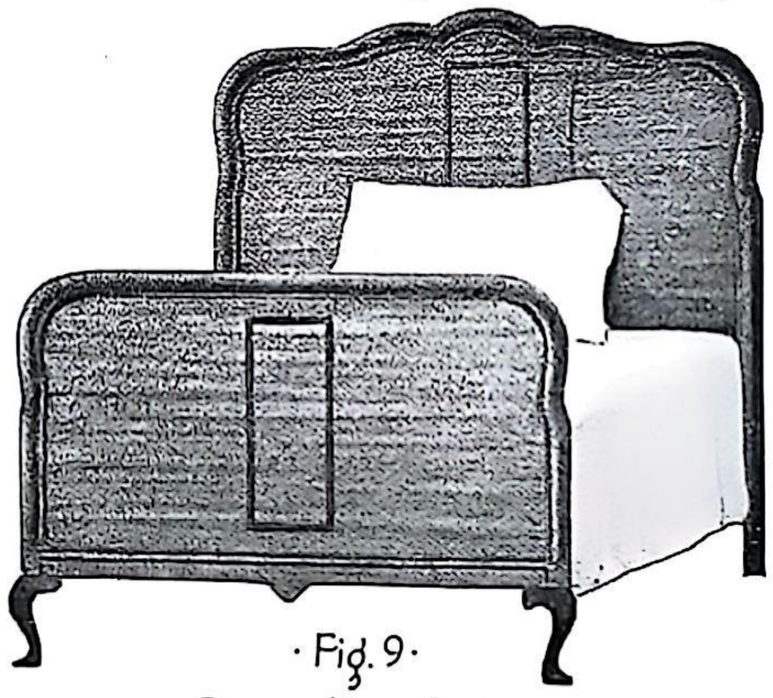
·Fig.5·
Modern American Dressing Table

·Fig.6·
Modern American Library Table

·Fig.7·
Queen Anne Dressing Table



·Fig.8·
Modern American Sideboard



·Fig.9·
Queen Anne Bed

Interior Decoration: Examples of Various Styles in Furniture. History is a record of the past. It is the story of peoples of earlier times, who, like ourselves, have lived in this world, and have expressed their times and customs through their literature, their music, their building, their furniture, textiles, etc. Some of their best styles in furniture may well be studied for adaptation to present day uses.

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CHAPTER V

DOMESTIC ART

Suggestions to Teachers

Embroidery Done with Germantown Wools: The table runner illustrated on page 43 is a fine problem for girls in eighth grade or high school classes. The design for the appliquéd squares should be worked out in connection with nature study, as plant shapes can so easily be adapted to the filling of a given space. Linen, sateen or poplin can be used as a background for the squares. The technique of the stitch, which is a combination of the satin stitch and the darning stitch, is more perfectly shown by the illustrations than it could be described.

The Ancient Art of Smocking: Outline stitch in smocking is described on page 44. On the same page will be found illustrated two other stitches, easy to work and highly decorative. The single cable stitch is much like the outline stitch. Start your thread on the second pleat at the gathering thread on the wrong side of the material, bringing the needle up in the first pleat on the right side of material. Take one stitch in every pleat, keeping the thread *above* the needle in the first stitch, and *below* the needle in the next stitch, then above the needle again, and so on.

Double cable stitch is made by working one row of single cable slightly above the gathering thread, and another row slightly below the gathering thread, but reversing the order of the thread above and below the needle. (See Fig. 9, page 45.)

The "wave" is another form of outline stitch. It consists of four stitches worked gradually up and four worked gradually down, between the gathering threads. (See Fig. 10, page 45.)

Tatting: A Succession of Movable Knots. For first exercises in tatting, use a firm cord, such as macremé, or a very coarse thread, and a black rubber shuttle. The one difficult thing in mastering the art of tatting is the "knack" of the little jerk, after every half-stitch, which places it as a loop upon the tense shuttle thread, on which it must slip. The illustrations on pages 48 and 49 show the processes of tatting more clearly than any written or verbal description.

Basketry: The Weaving of a Cover. To make the cover of the basket shown on page 50, the following materials are necessary; eight spokes of No. 3 reeds, 20″ long; one spoke No. 3 reed, 11″ long; sixteen spokes No. 3 reed, 9″ long; one No. 1 weaver; several No. 2 weavers; thirty-three small wooden beads. Begin as with the mat (Part VII, page 48), weave to 3″ diameter. Add the sixteen 9″ spokes. Separate the spokes and place a bead on each one. Make four rounds triple weave (see directions for weaving basket, page 50) gradually bending spokes down to fit loosely over the basket. Finish the cover with edge same as that of basket.

For the handle, use a No. 2 reed, about two yards long. Fasten one end into the weaving about 1½″ from center. Weave the other end in and out around a spoke, in opposite side of center, to make the foundation for the handle. Wrap the long end around the foundation to make two twists, and weave it in and out, where short end was fastened. Wrap the long end around foundation, exactly beside the two twists, and weave it in and out. Continue wrapping back and forth, always weaving in and out around a spoke, until the foundation is covered. Fasten the end into the weaving. Trim the ends of all weavers.

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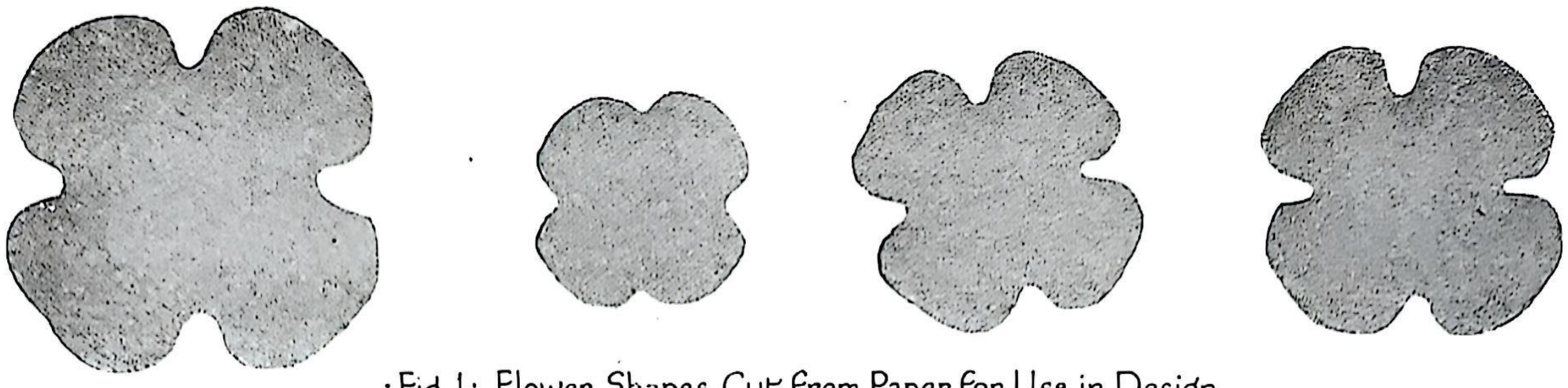
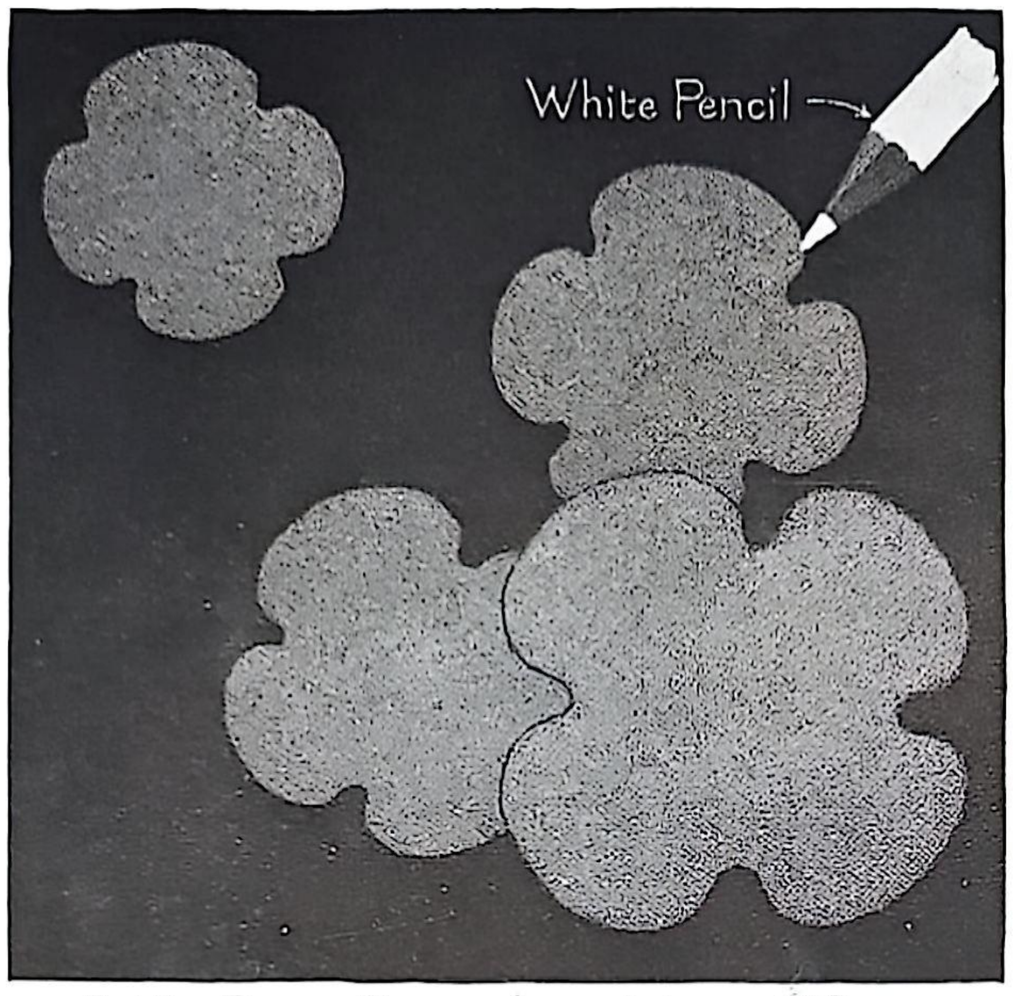


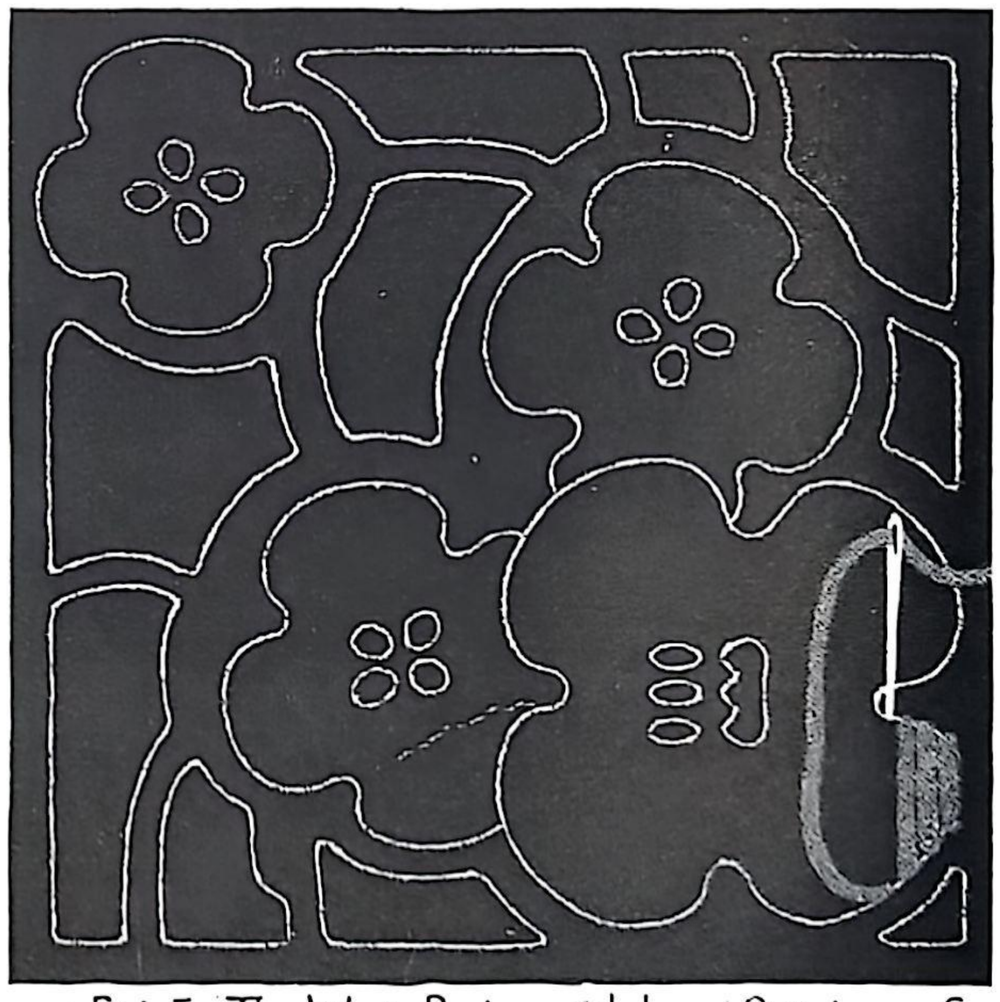
· Fig. 1 · Flower Shapes Cut from Paper for Use in Design



· Fig. 2 · Flower Shapes Arranged on a 5" Square of Black Linen

· Fig. 3 · The Flower Shapes Traced with White Pencil

Fig. 4 · Background Shapes Drawn, Leaving Pathways between All Shapes



· Fig. 5 · The Work Begun with Long Stitches of Germantown Wool

Domestic Art: The Development of a Design for Wool Embroidery.

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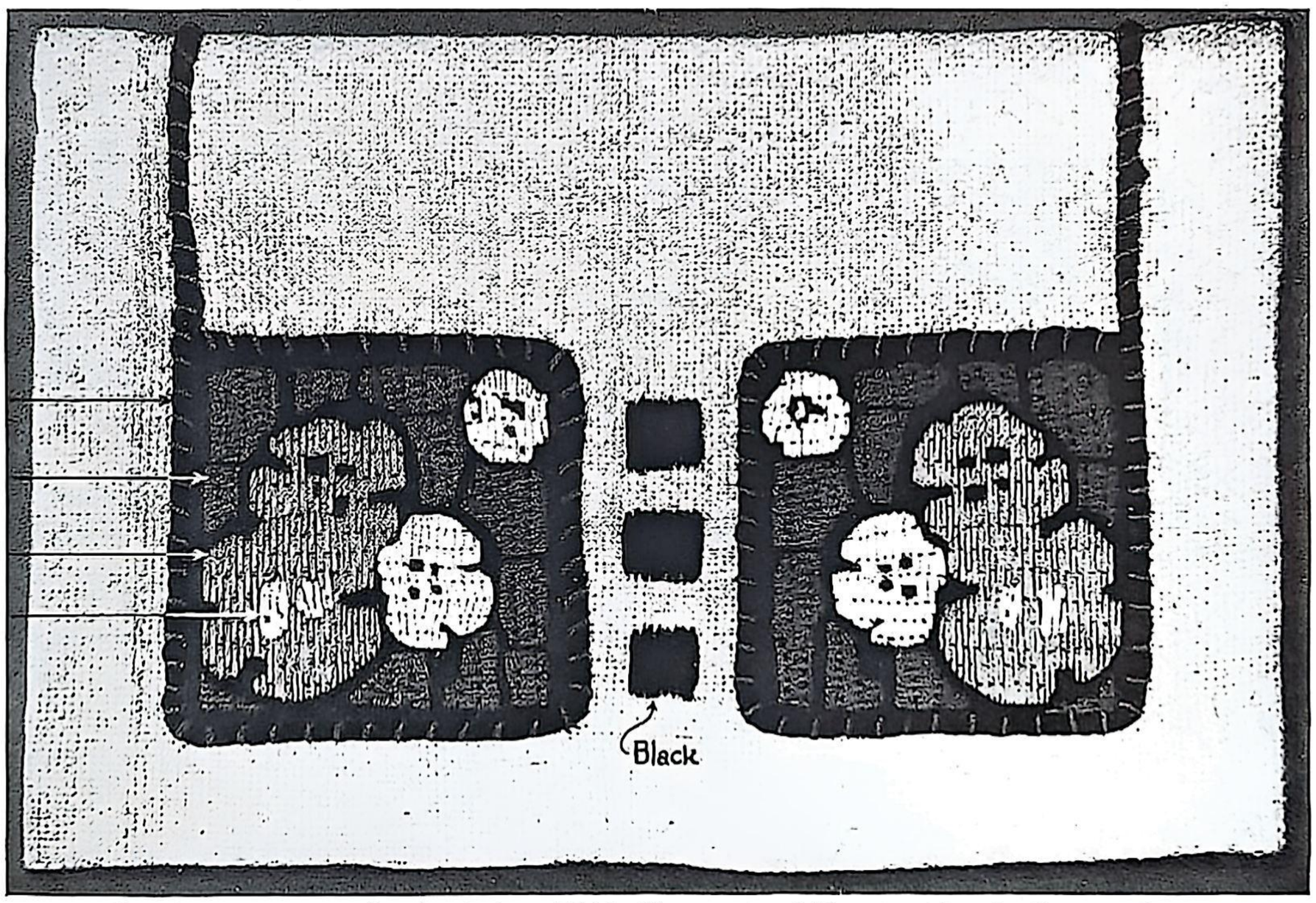
· Fig. 6 · Stitches on Flower Shapes and Background Shapes Run in Opposite Directions · · ·

· Fig. 7 · Long Stitches Held Down by Darning Stitches of Black · · · · ·



· Fig. 8 · Squares Appliqued to Table Runner and Finished with Couch Stitch

Domestic Art: A Table Runner with Appliquéd Squares of Wool Embroidery. Monk's cloth, in natural color, was used for the table runner illustrated. Figs. 1 to 4, page 42, show the steps in planning the design for the squares, which were appliquéd in each corner, after the embroidery was done. The stitch shown in Figs. 5 to 7 is an easy one. The cord couched around the squares and down the sides was knotted from black Germantown. (See Part III, page 45).

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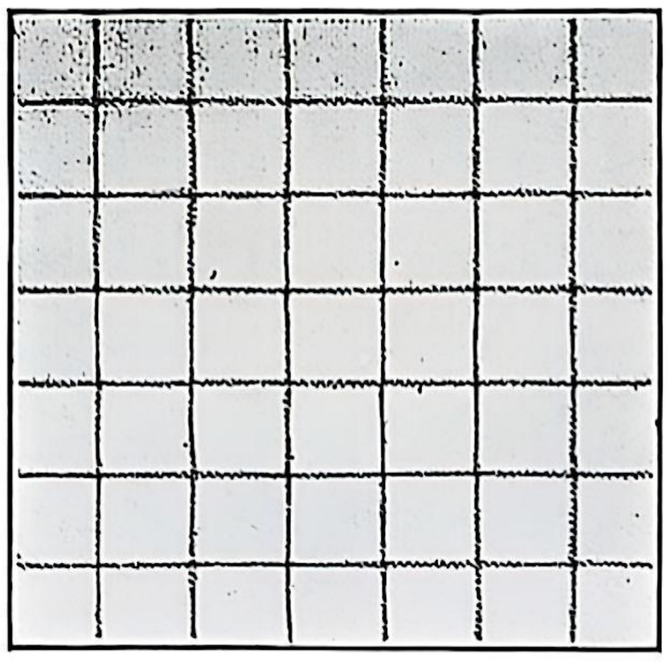
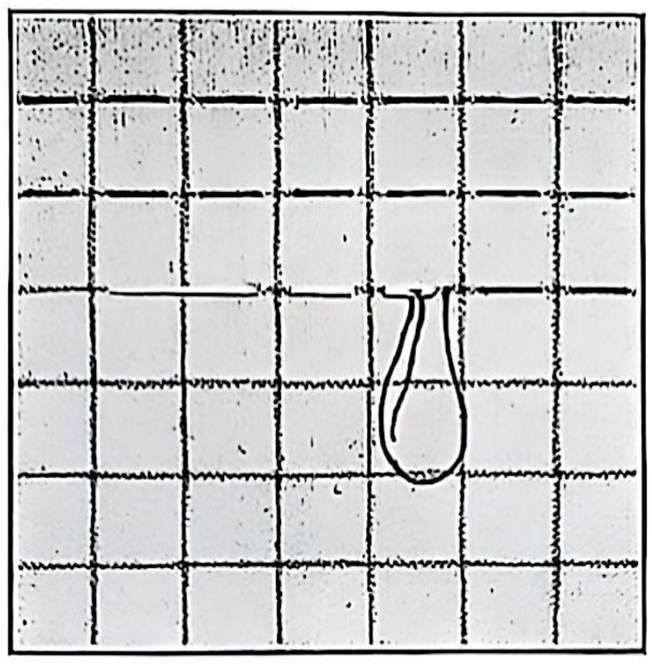
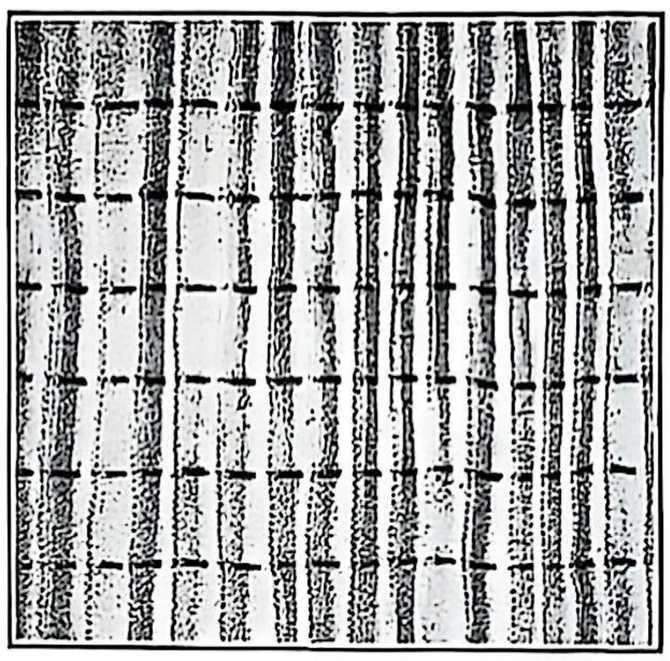


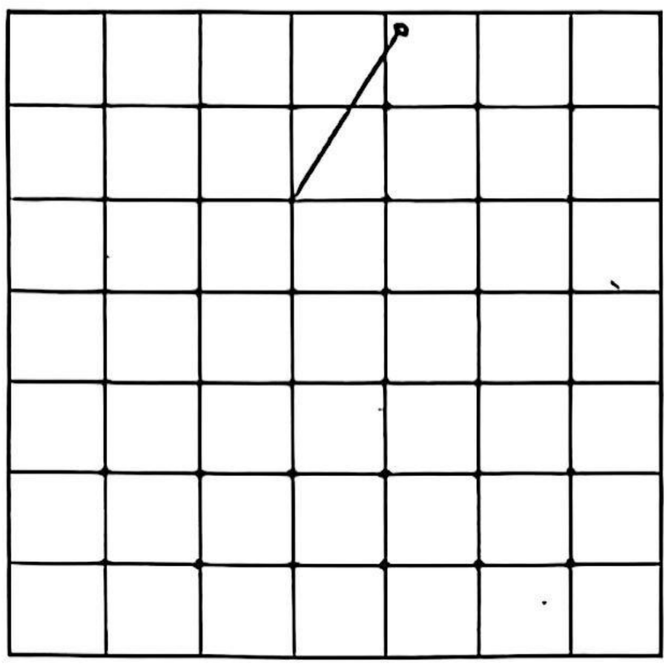
·Fig. 1·
Checked Crash – ½" Squares



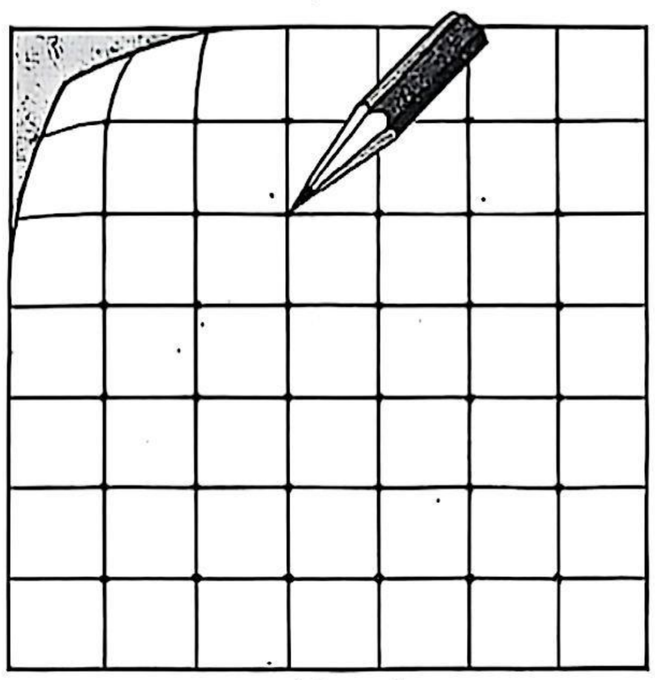
·Fig. 2·
Method of Inserting Gathering Threads



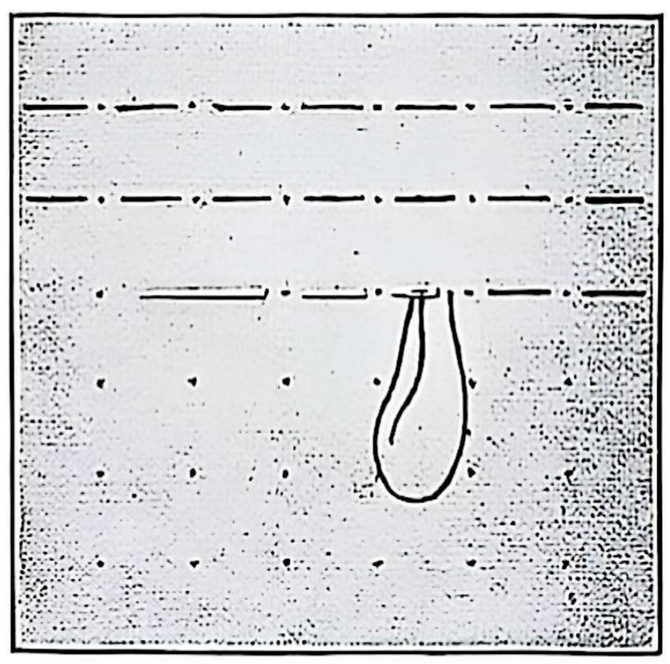
·Fig. 3·
Crash Shirred on Gathering Threads · · ·



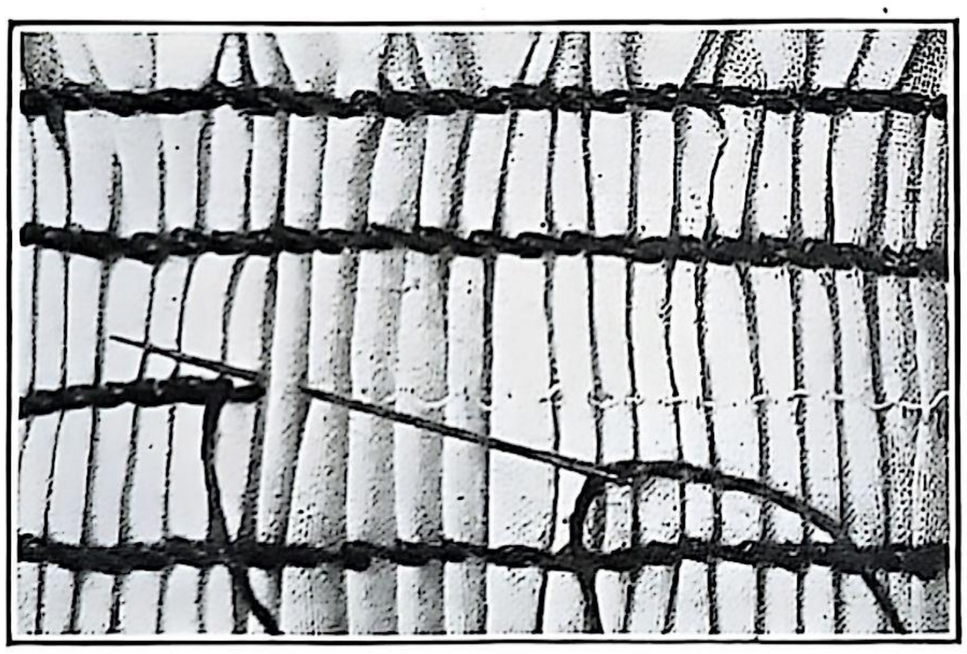
·Fig. 4·
Paper Ruled in ½" Squares as Basis for Perforations



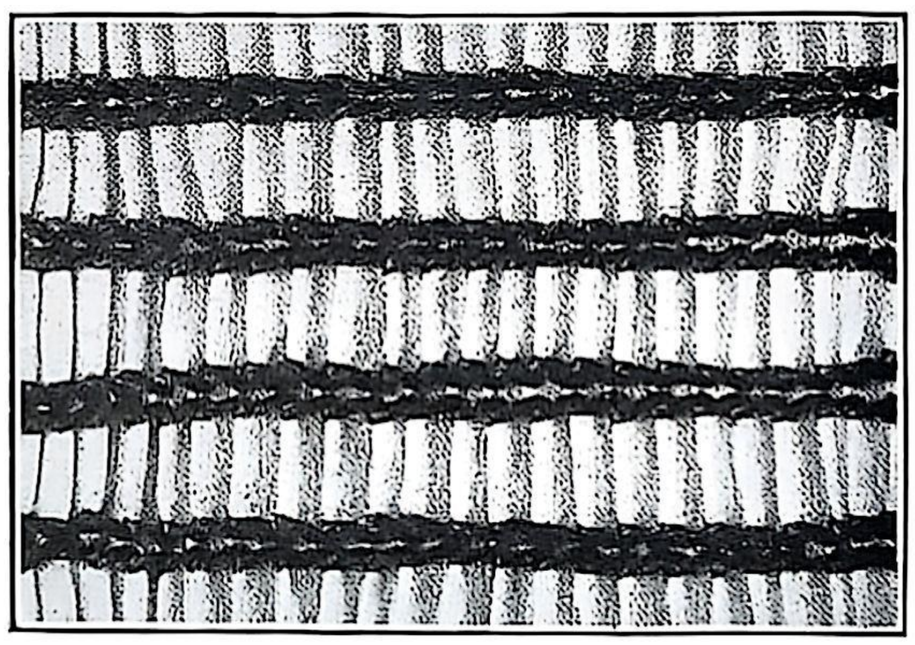
·Fig. 5·
Perforated Paper Placed Over Fabric – – – Pencil Marking the Spaces · ·



·Fig. 6·
Spaces Marked on Fabric · Method of Placing Gathering Threads · · · ·



·Fig. 7· Outline Stitch in Process



·Fig. 8· Double Outline Stitch

Domestic Art: Smocking. The beauty of the work depends on the evenness of the gathering threads. Use No. 40 thread in gathering crash or gingham (Figs. 1, 2 and 3). Figs. 4, 5 and 6 show you how to mark the squares on plain cloth. The various smocking stitches are usually worked in colored embroidery threads (Figs. 7 to 10). Unbleached muslin, smocked in red or blue embroidery cotton, gives a fine effect.

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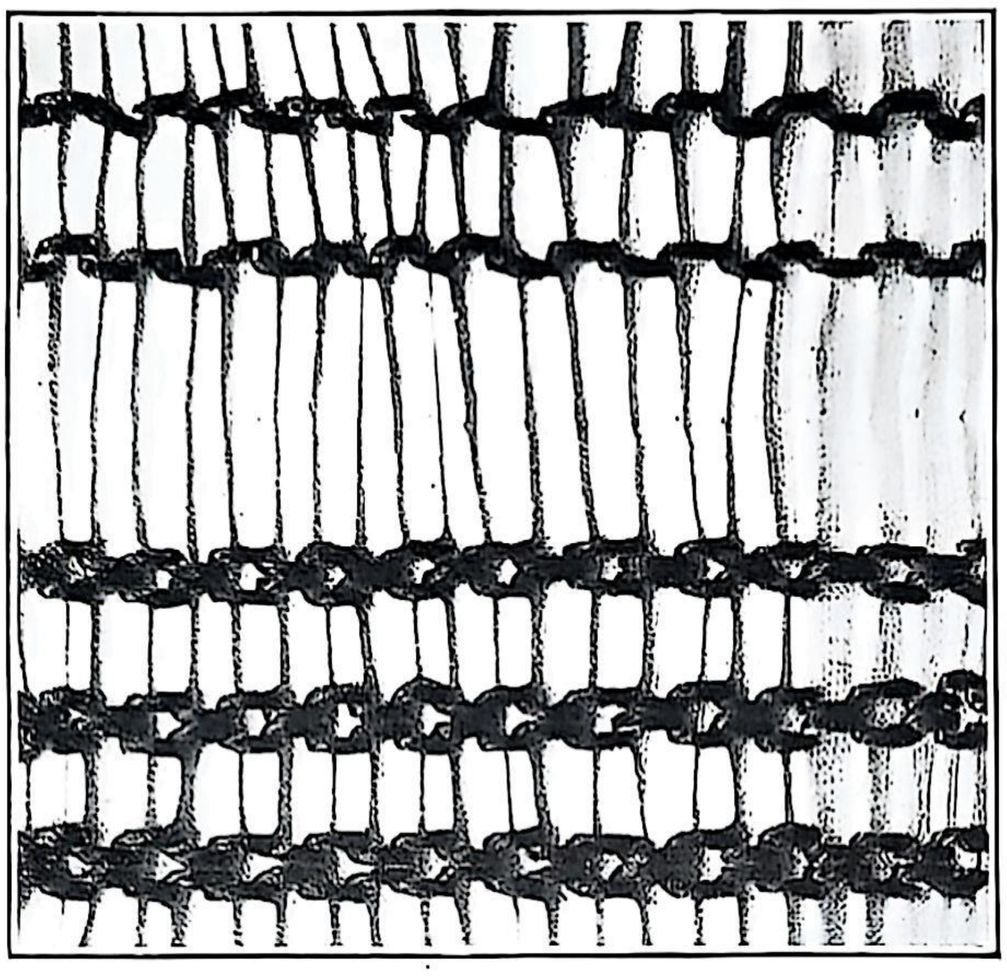
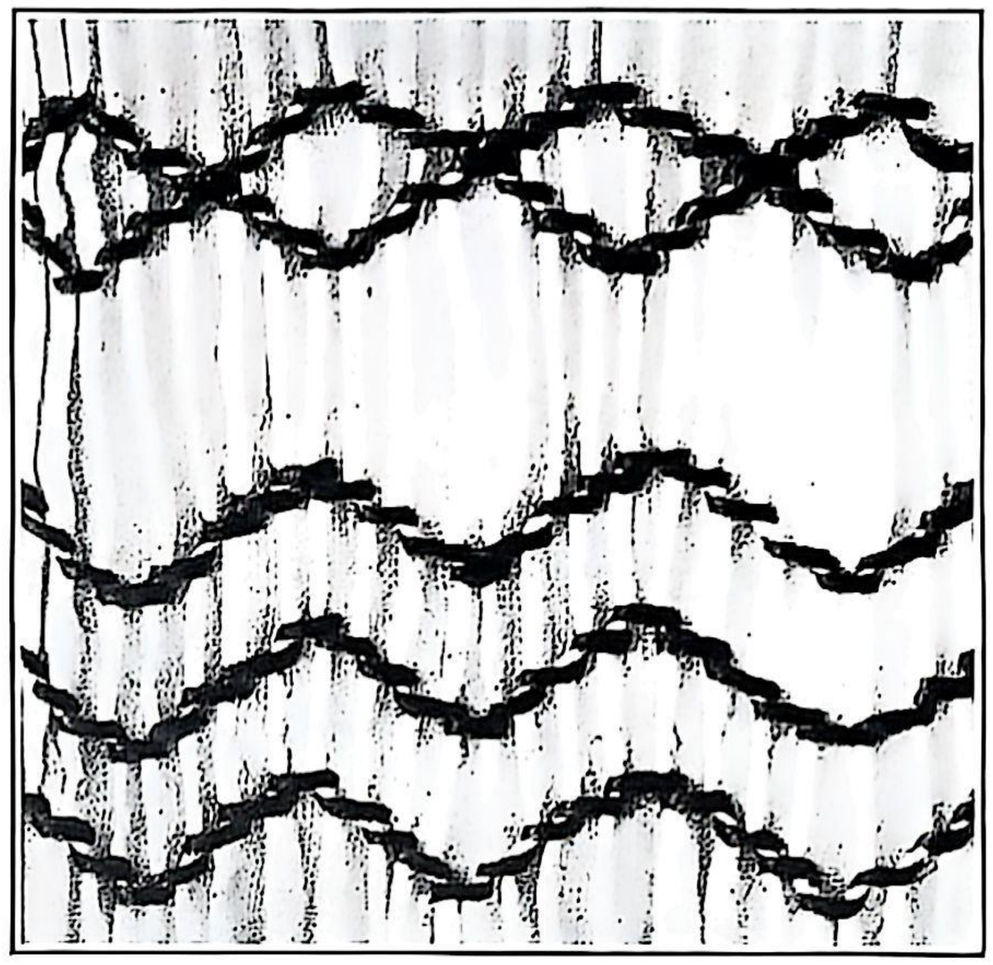
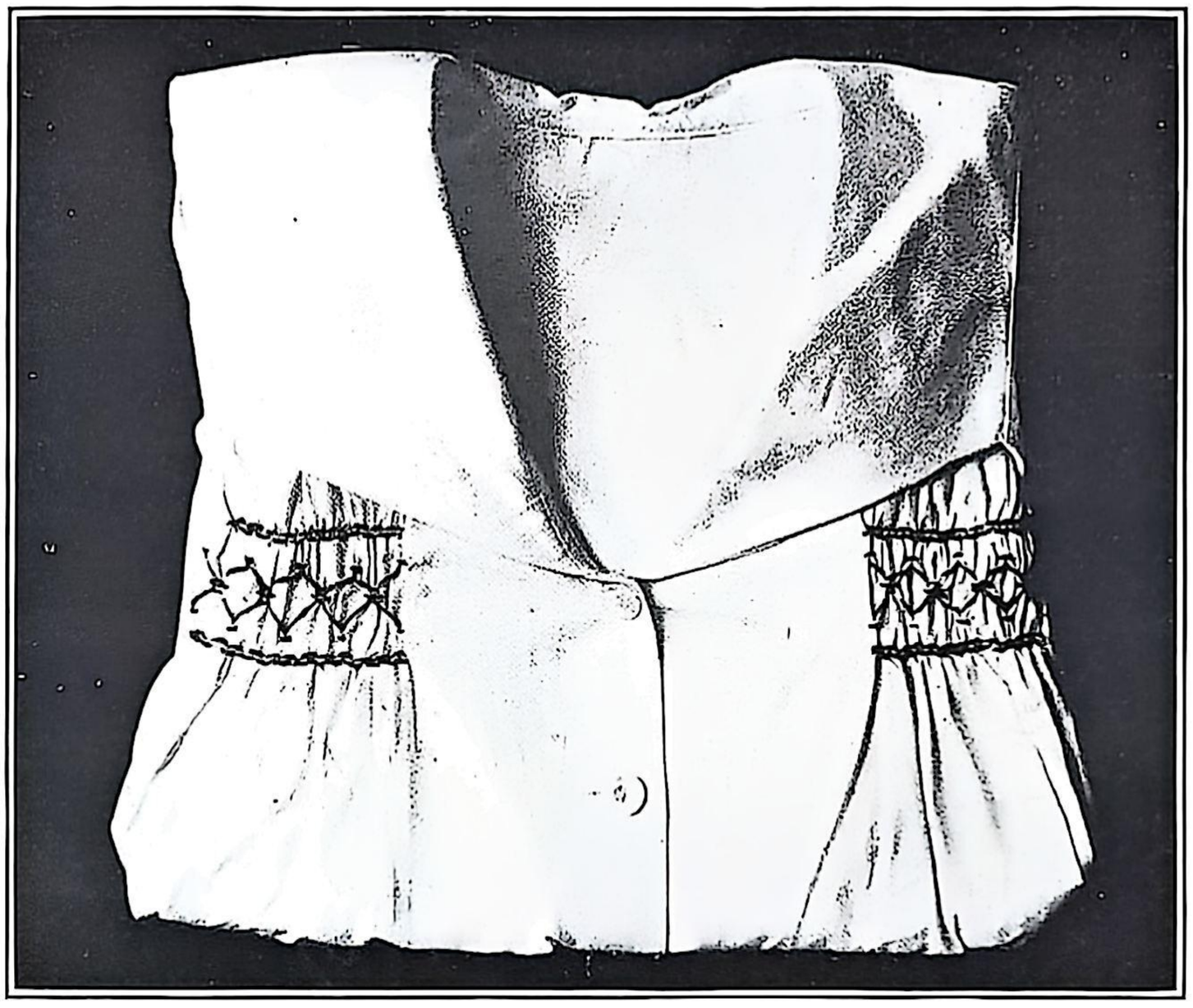


· Fig. 9 · Single and Double Cable Stitch



· Fig. 10 · Single and Double Wave Stitch



· Fig. 11 · A Smocked Waist or Blouse

Domestic Art: The Simpler Stitches Used in Smocking. The outline stitch is used in starting most patterns. It is worked from left to right, and the gathering thread acts as a guide in keeping the work straight. Start your thread on the second pleat at the gathering thread on the wrong side of the material, bringing the needle up in the first pleat on the right side of the material. Take one stitch in every pleat, keeping the thread below the needle, and every stitch exactly on the top of the gathering thread, all along the line (Fig. 7).

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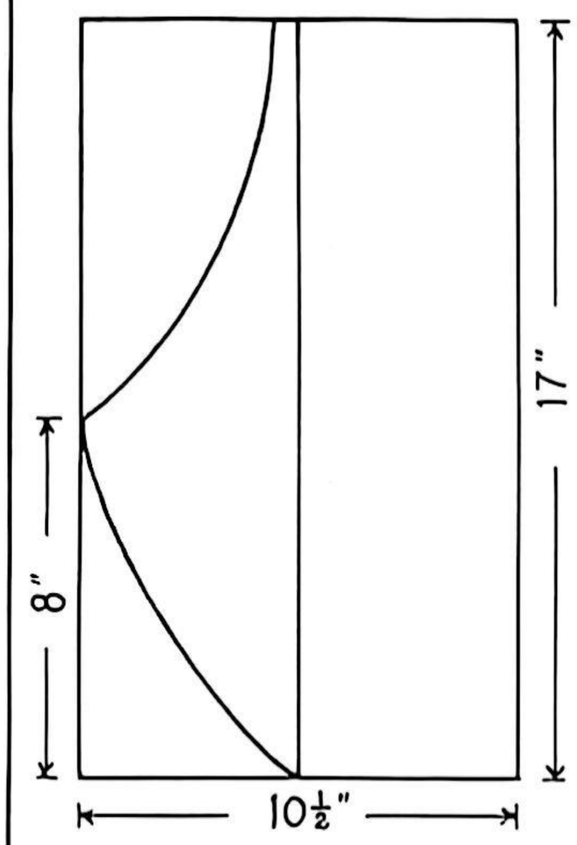
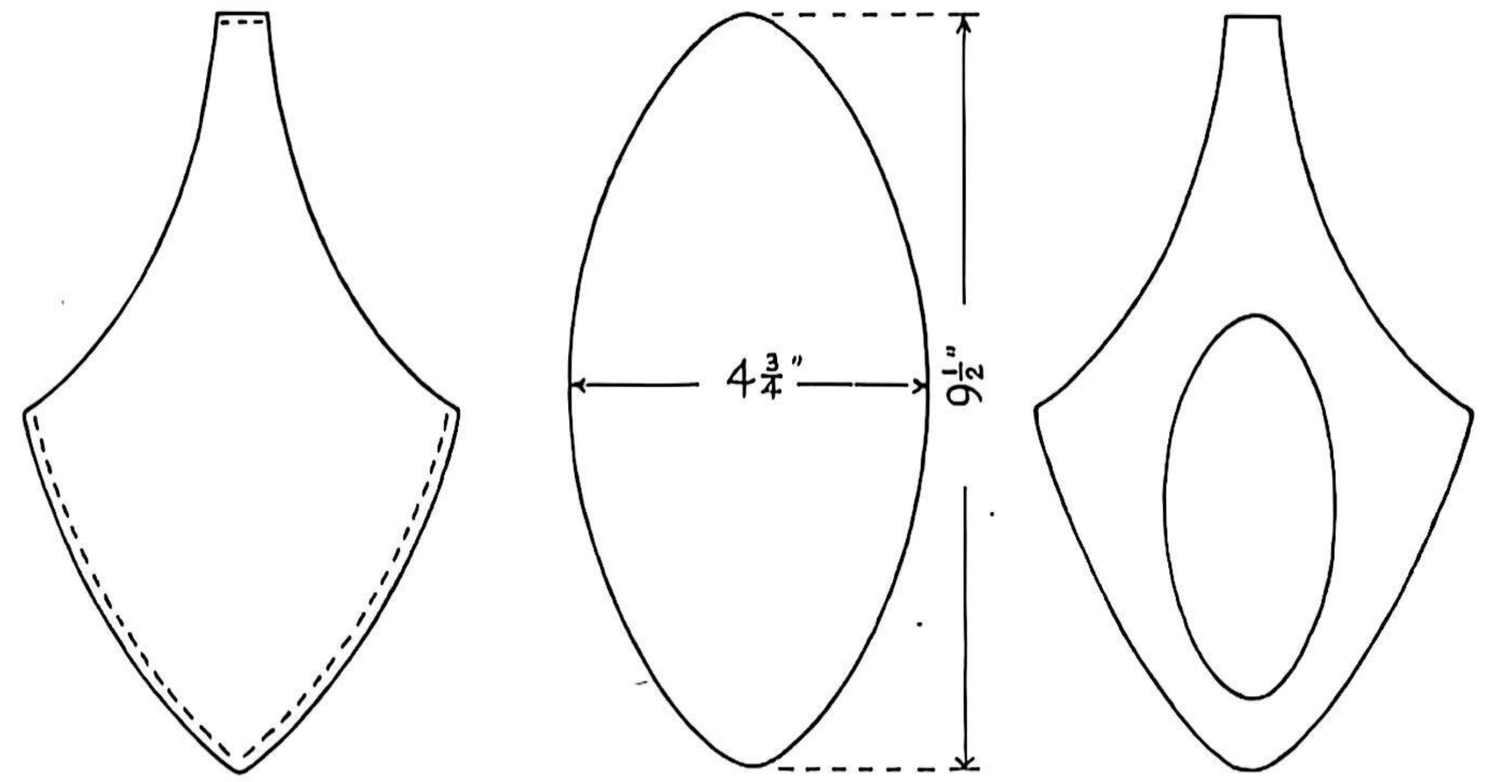
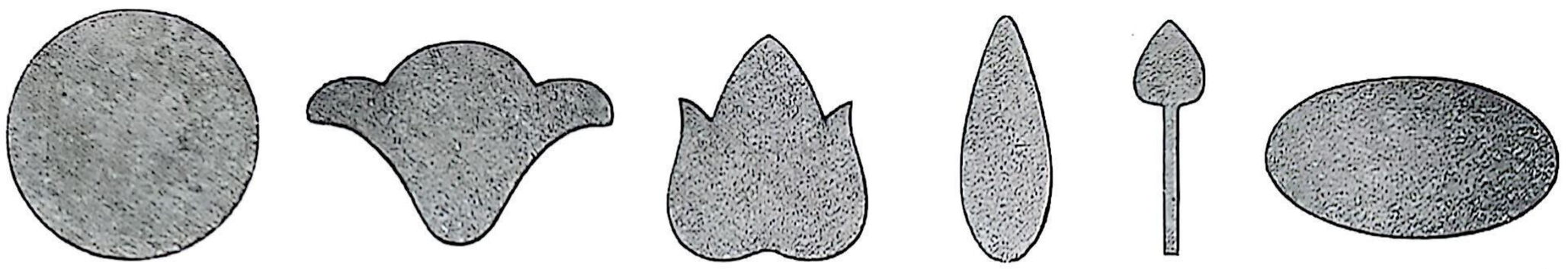


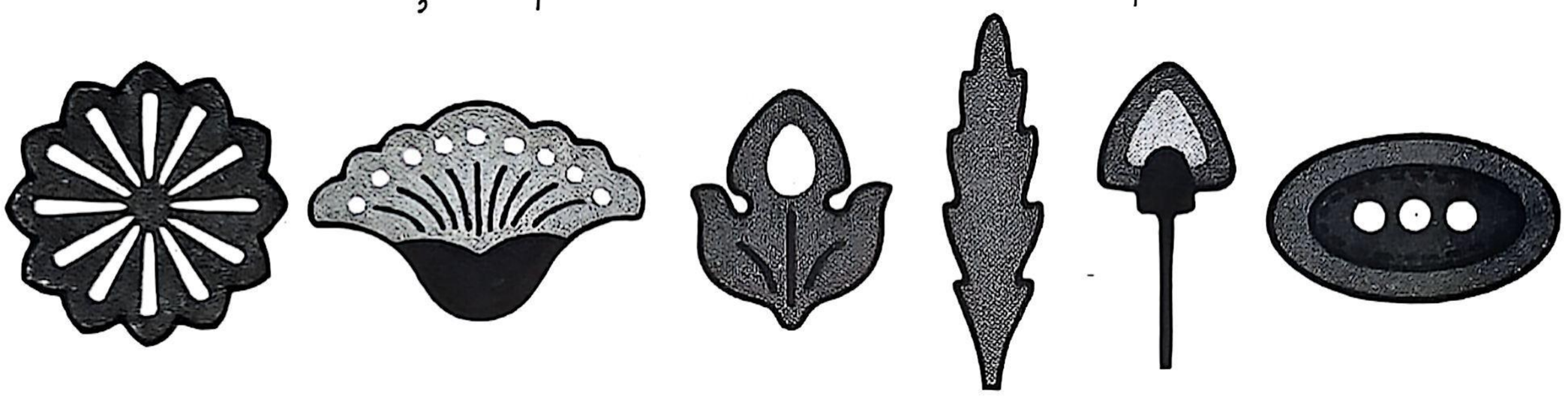
·Fig.1· Paper Pattern for Knitting Bag

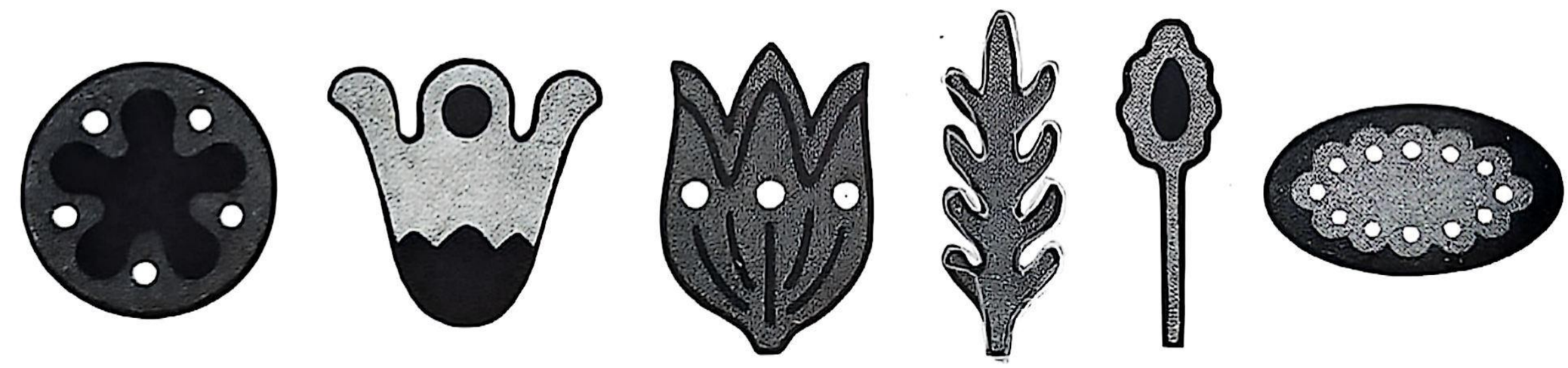


·Fig. 2· Pattern of Shape for Design of Background



·Fig.3· Paper Cut Elements Based on Plant Shapes





·Fig.4· Variations Based on Flower Shapes Found in Fig.3

Domestic Art: A Design for a Knitting Bag. The design for this bag is to be worked out first in paper. The elliptical shape shown in Fig. 2 is to be cut from white paper and laid or pasted on the colored pattern. Various plant shapes are then cut from toned papers, and modified in many different ways. The modified shapes are then assembled on the elliptical background and pasted in place.

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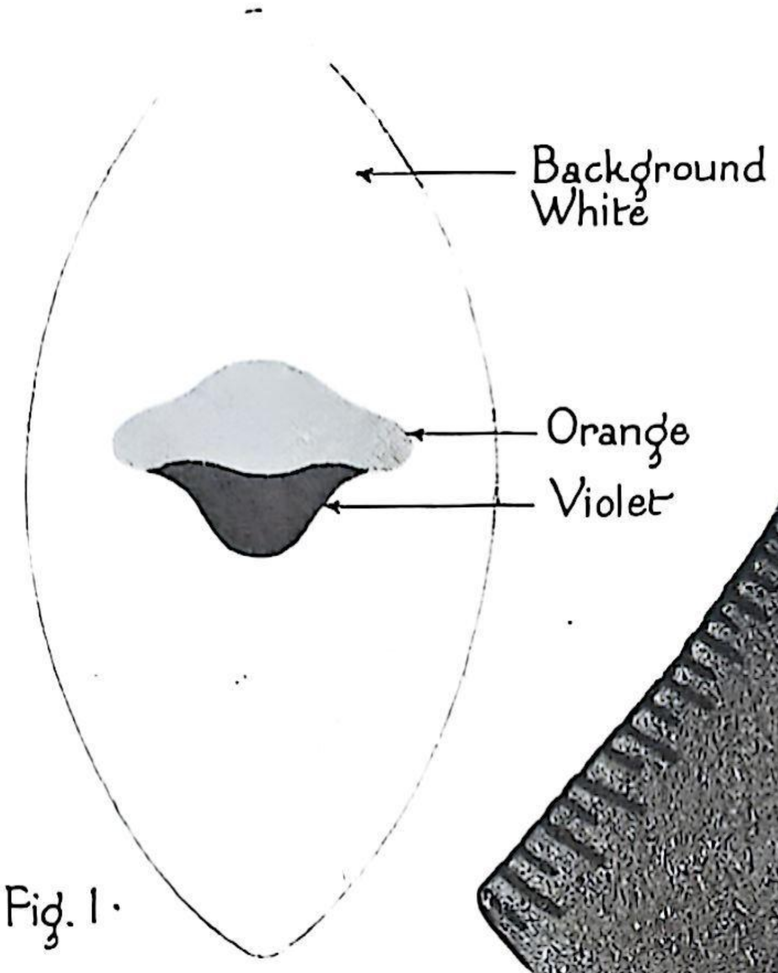
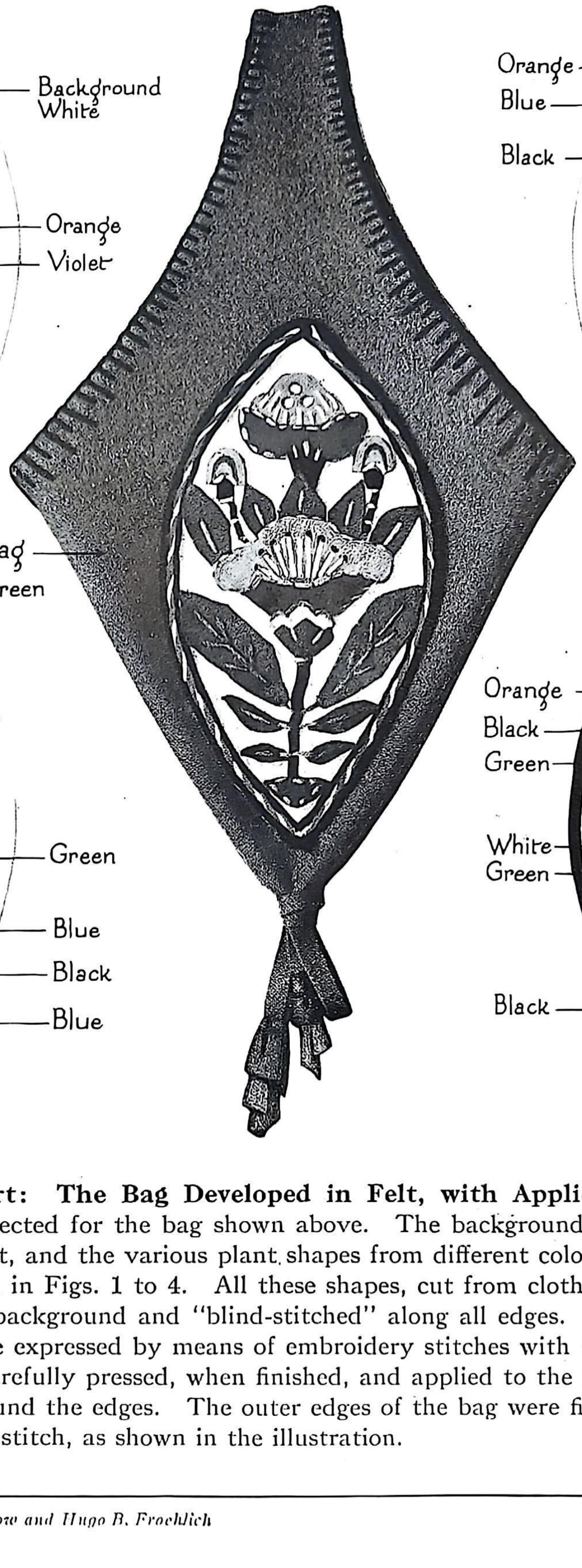
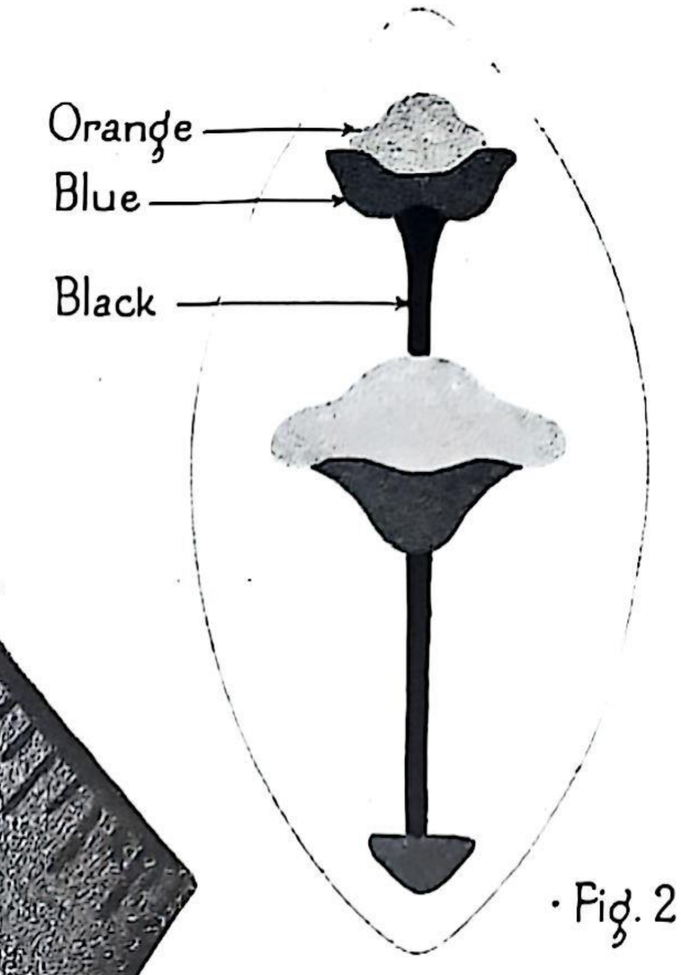
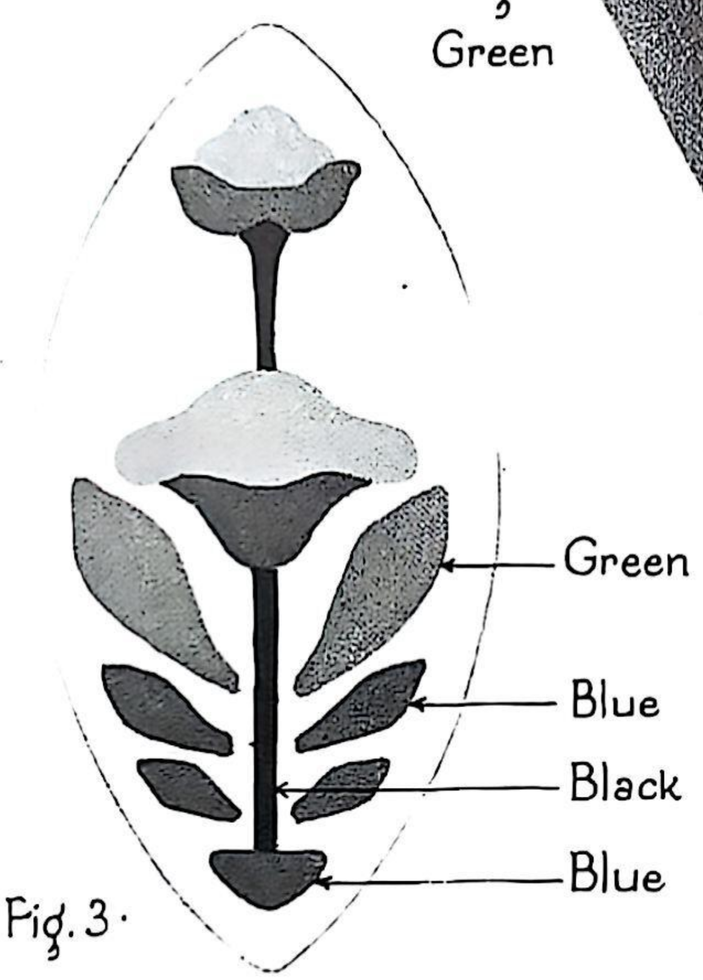


· Fig. 1 ·

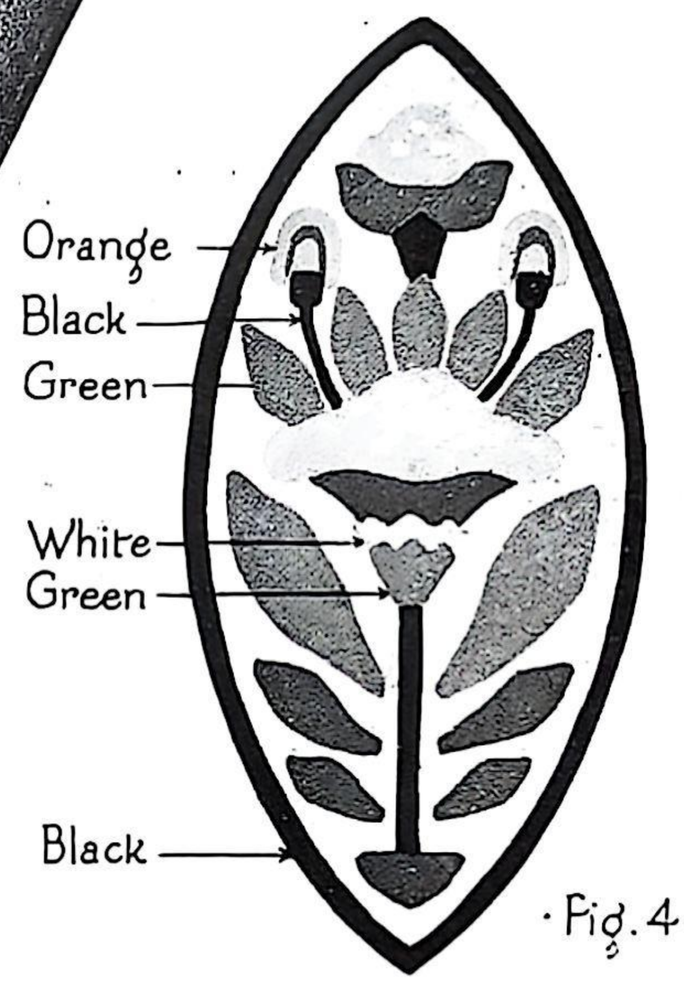




· Fig. 2 ·



· Fig. 3 ·



· Fig. 4 ·

Domestic Art: The Bag Developed in Felt, with Applique Embroidery. Green felt was selected for the bag shown above. The background of the design was cut from white felt, and the various plant shapes from different colors of felt or broadcloth, as indicated in Figs. 1 to 4. All these shapes, cut from cloth, were then basted to the white felt background and "blind-stitched" along all edges. The modifications of the shapes were expressed by means of embroidery stitches with Germantown yarn. The design was carefully pressed, when finished, and applied to the bag by means of a cord, couched around the edges. The outer edges of the bag were finished with a long and short blanket stitch, as shown in the illustration.

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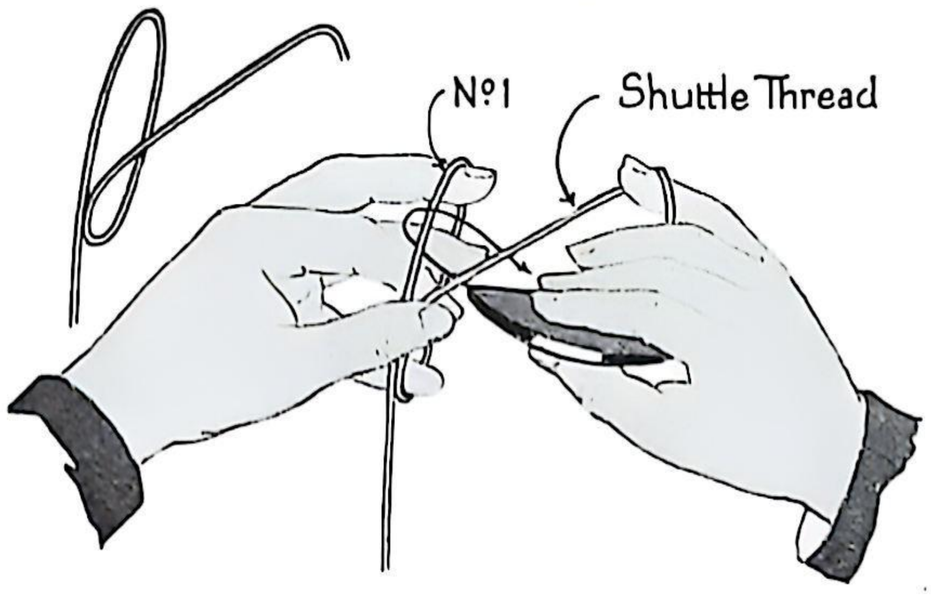
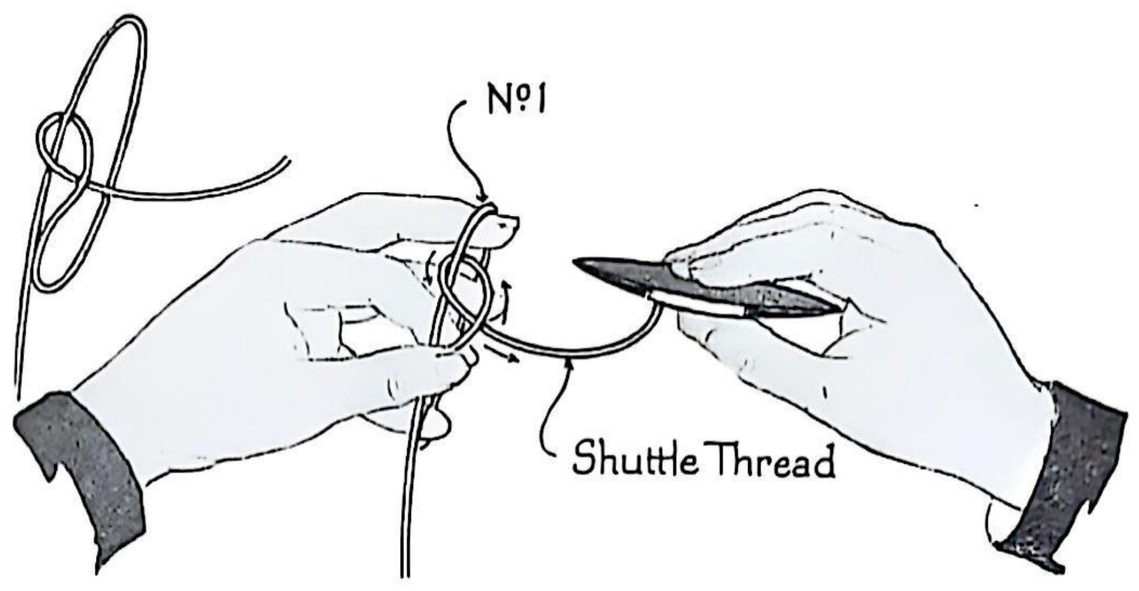
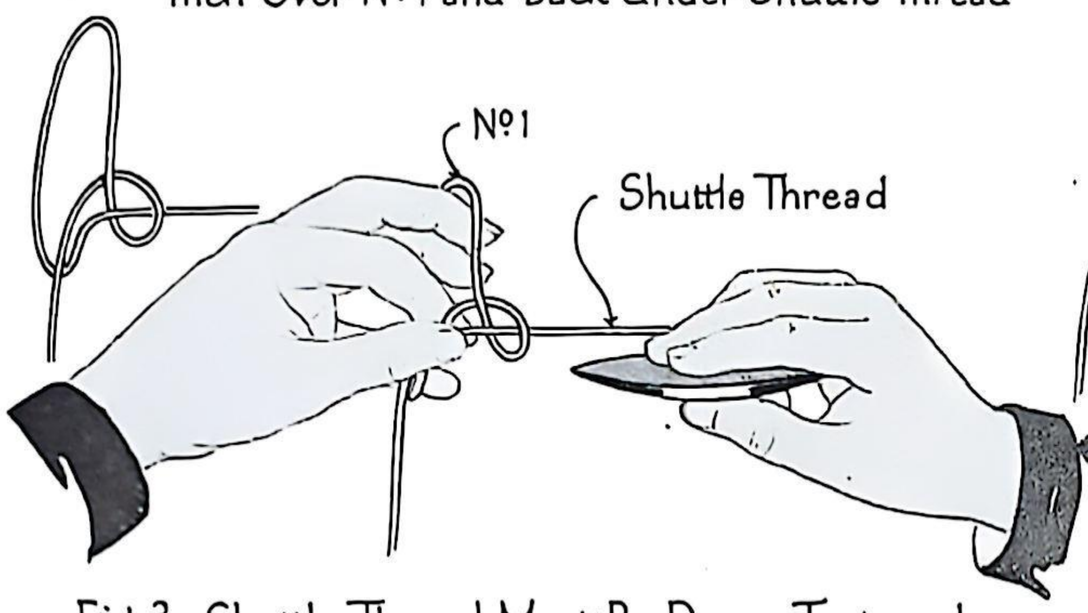


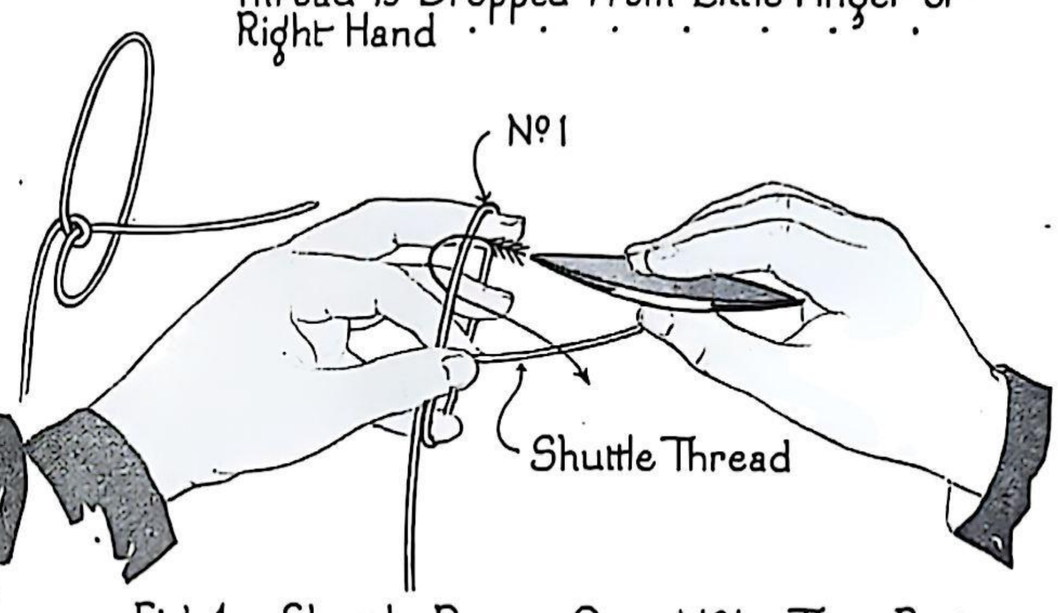
· Fig. 1 · Shuttle Passes Under Shuttle Thread and Nº1 Then Over Nº1 and Back Under Shuttle Thread



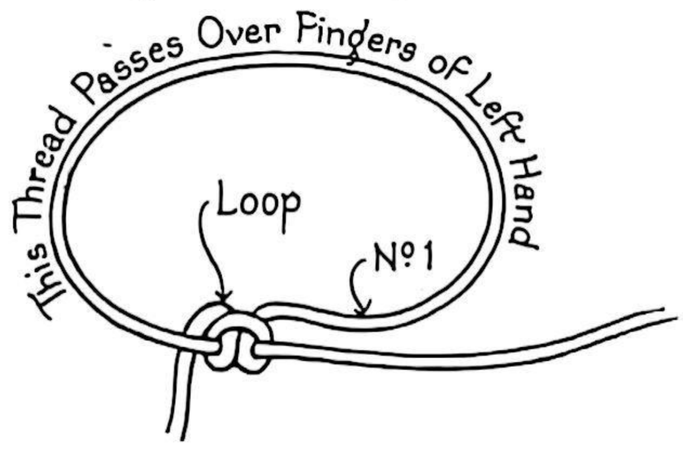
· Fig. 2 · Shuttle Has Passed Thru Loop and Shuttle Thread is Dropped from Little Finger of Right Hand · · · · · · · · ·



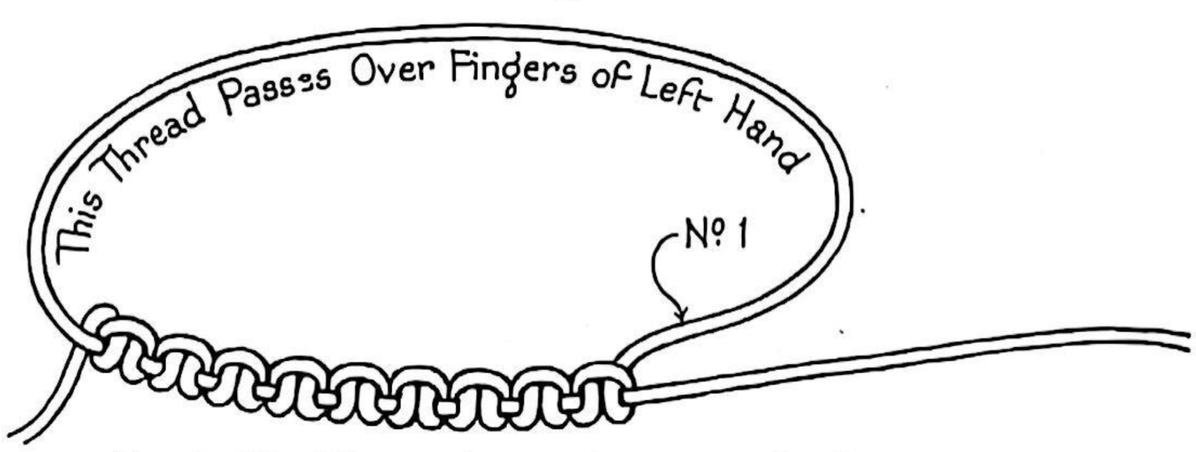
· Fig. 3 · Shuttle Thread Must Be Drawn Taut and Nº1 Must Be Eased to Form a Movable Loop on Shuttle Thread · Draw Loop Snug by Middle Finger of Left Hand · · ·



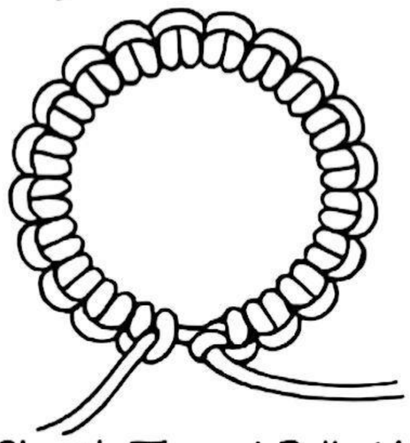
· Fig. 4 · Shuttle Passes Over Nº1 – Then Backs Under Nº1 and Over Shuttle Thread · Draw Shuttle Thread Taut and Proceed as in Fig. 3 · · · · · · · · ·



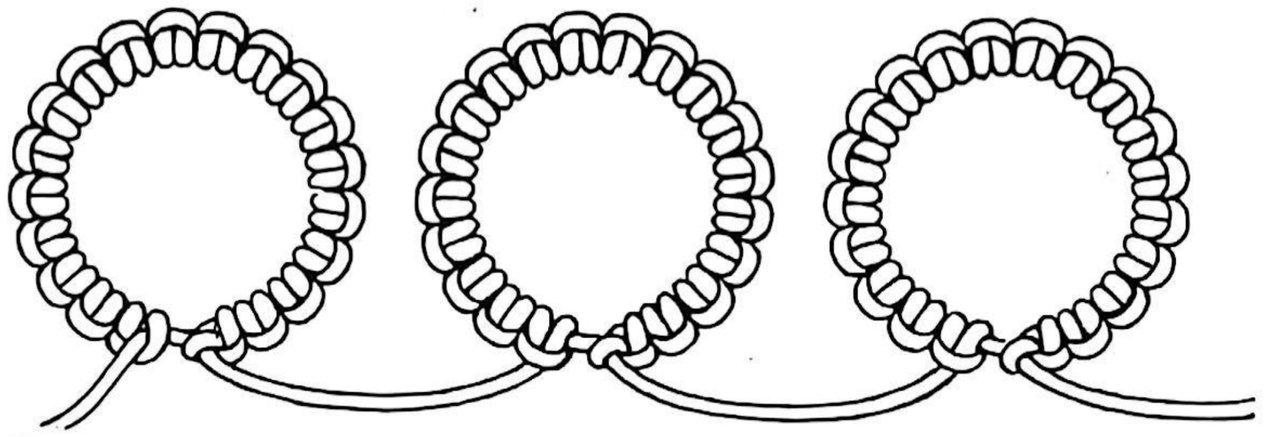
· Fig. 5 · First Stitch – Observe that Stitch Slips Easily on Shuttle Thread at Bottom of Work



· Fig. 6 · The Tatting Stitch Repeated for Practice



· Fig. 7 · Shuttle Thread Pulled Up Tight Until First and Last Stitches Meet to Form Ring ·



· Fig. 8 · Repetition of Rings for Practice

Domestic Art: Tatting. Hold shuttle with sides between thumb and first finger of left hand. The thread passes under the shuttle, under three fingers, over the little finger and then to the left hand. There the thread encircles all of the fingers and passes up between the thumb and forefinger.

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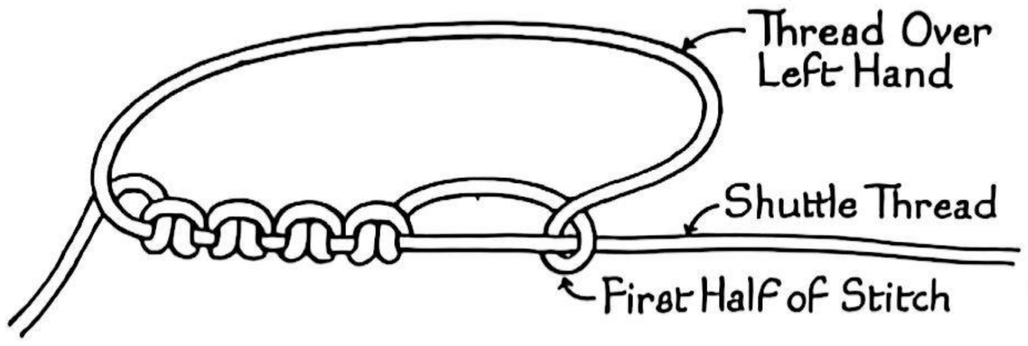
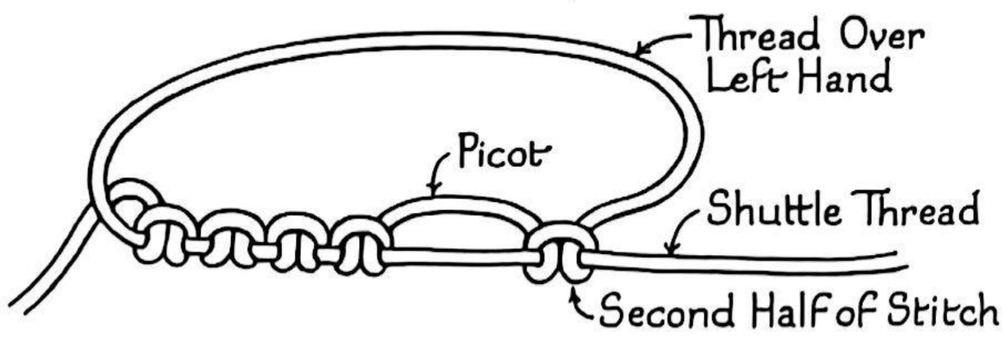
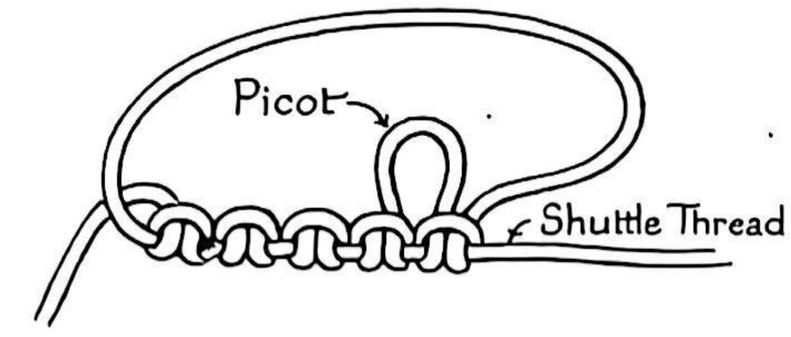


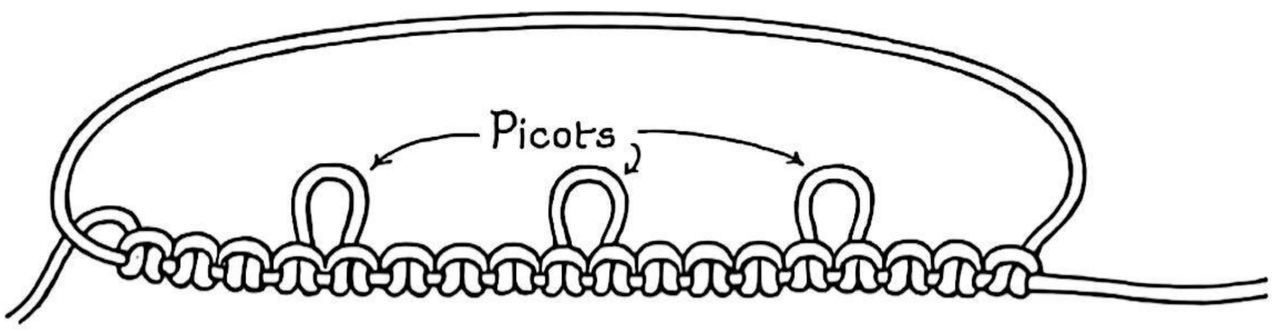
· Fig. 9 · First Step in Making Picot



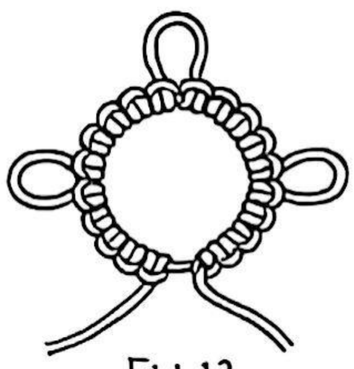
· Fig. 10 · Second Step in Making Picot



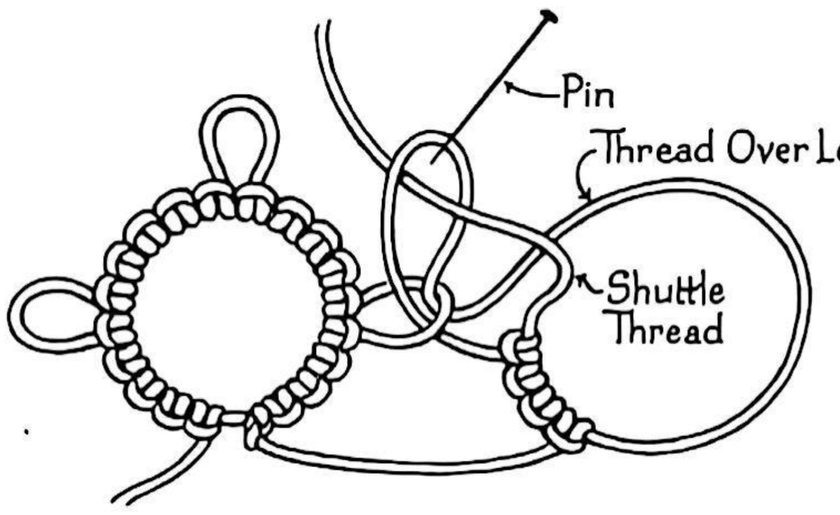
· Fig. 11 · The Stitch Drawn Up to Form Picot



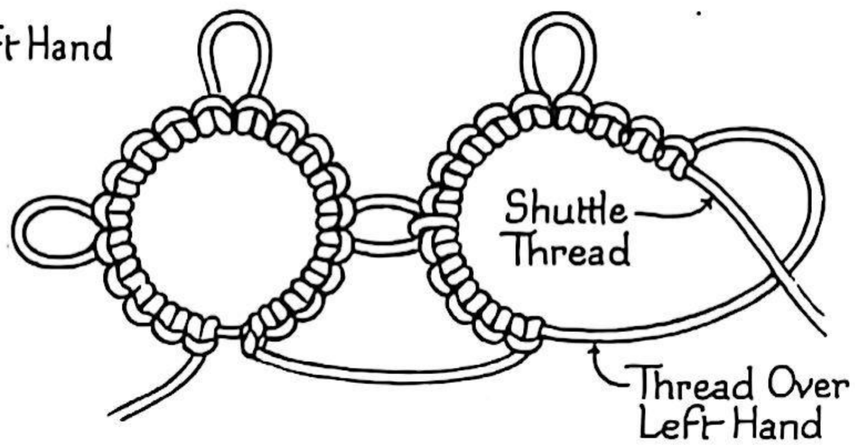
· Fig. 12 · First Step in Making Ring with Three Picots



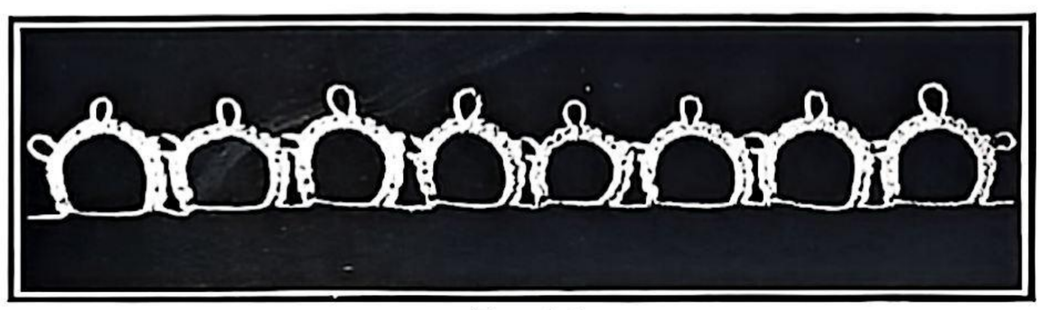
· Fig. 13 ·
The Stitches Drawn
Up to Complete Ring



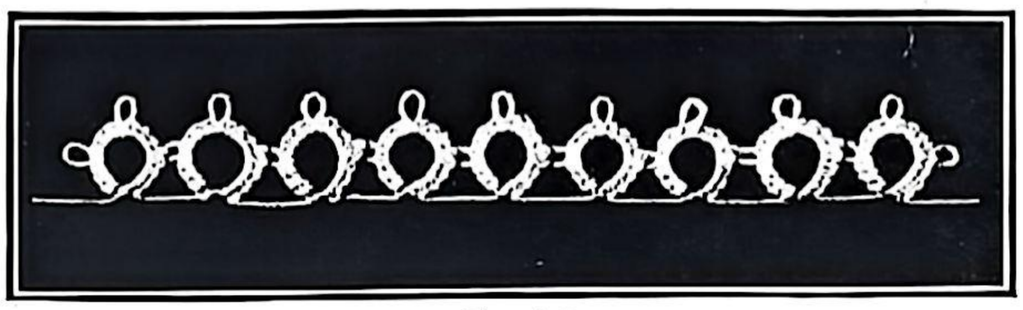
· Fig. 14 · Method of Joining Picots



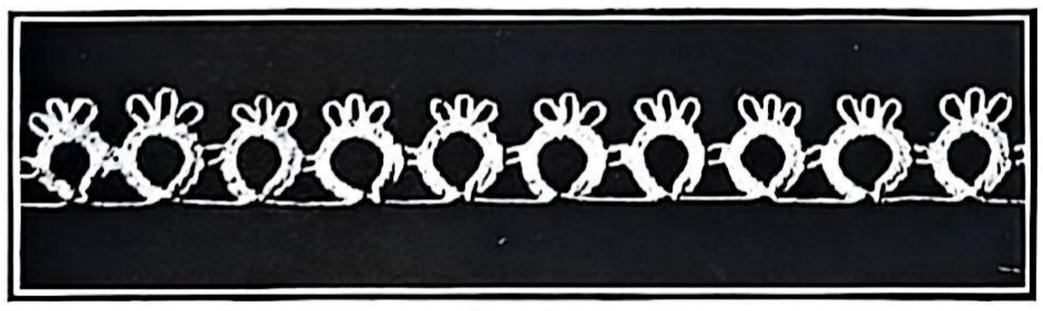
· Fig. 15 · How to Continue the Rings



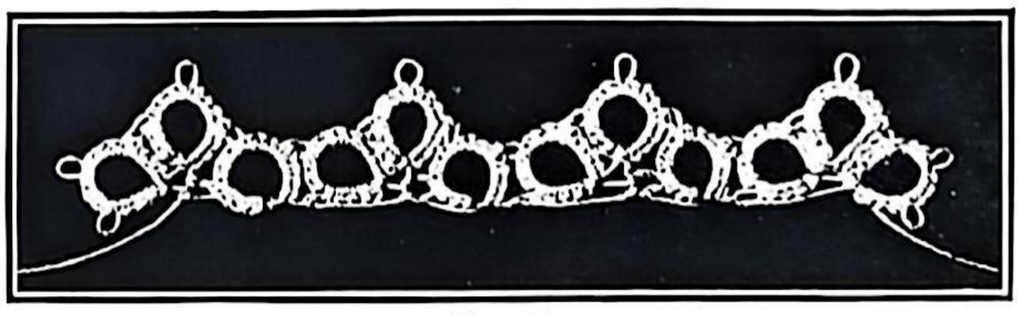
· Fig. 16 ·



· Fig. 17 ·



· Fig. 18 ·



· Fig. 19 ·

Domestic Art: Development of the Picot in Tatted Edgings. Picots (pronounced pe-cos) are tiny loops around the edge of a ring of tatting. To make a picot, leave a little space between two double stitches, finish the stitch which holds the picot in place, then pull up closely (Figs. 9, 10 and 11). Figs. 12 and 13 show the process of making a ring with three picots. Long picots are not desirable. Fig. 14 shows how the picots are joined. Use a pin or a crochet hook in pulling the thread through the loop. Fig. 15 shows how to continue the rings. Figs. 16, 17, 18 and 19 show simple variations of tatted edges.

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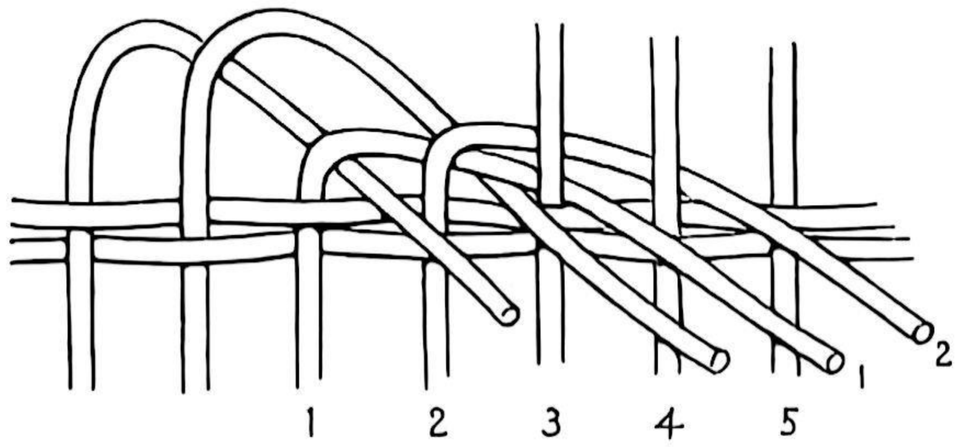


Fig. 1. First round in finishing the top:
Lay #1 down behind #2 and 3 and out in front of #4
Lay #2 down behind #3 and 4 and out in front of #5

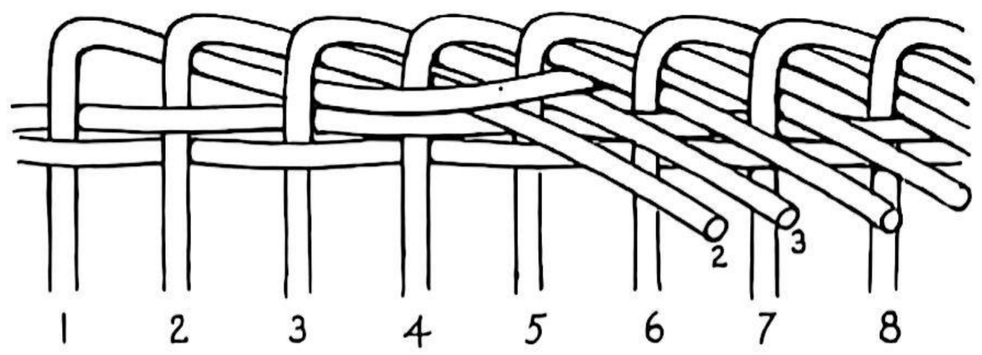
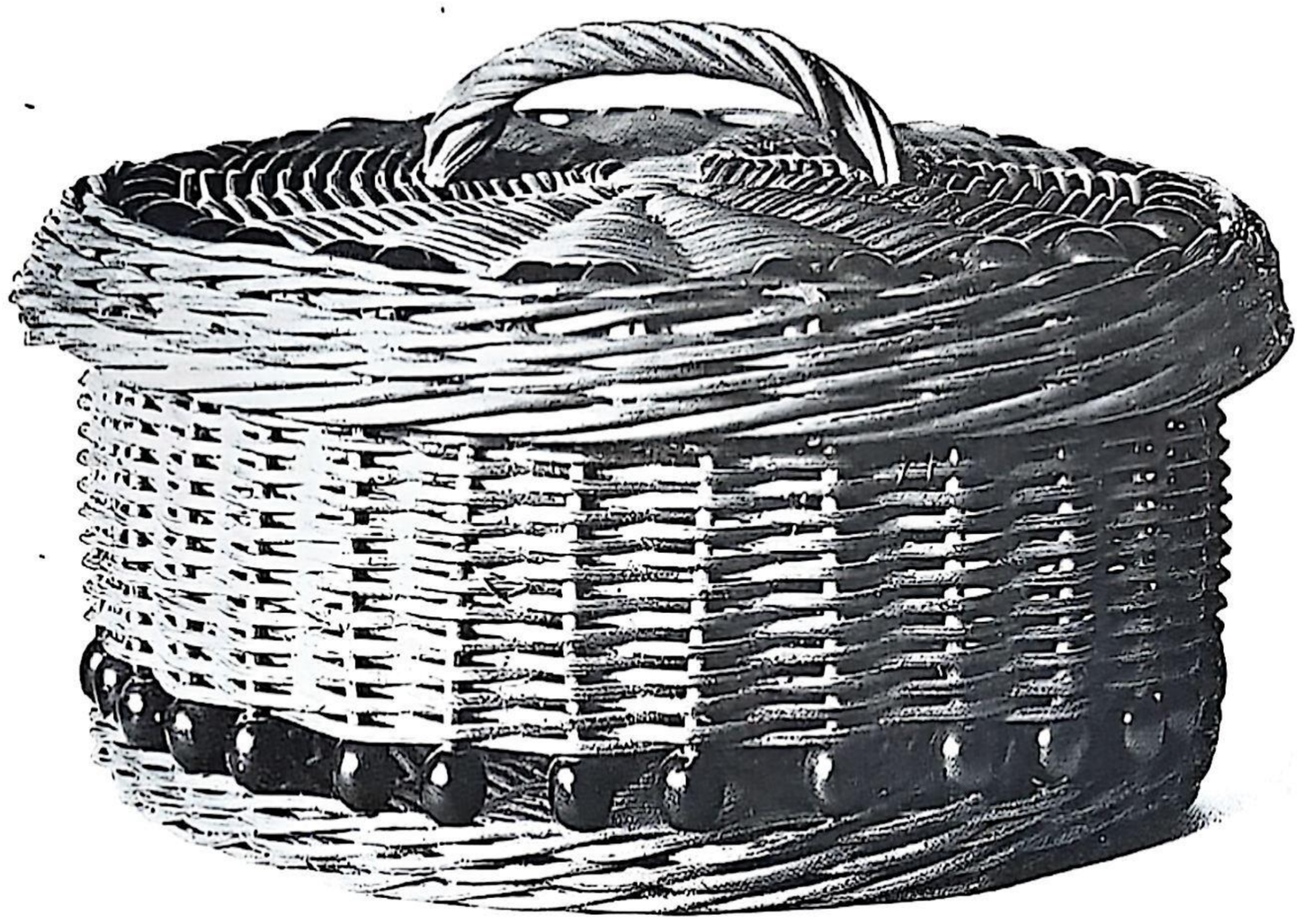


Fig. 2. Second round in finishing edge:
Lay #1 over #2 and 3 and in thru the basket in front of #6
Lay #2 over #3 and 4 and in front of #7



Domestic Art: An All-Rattan Basket with a Cover. Select eight spokes of No. 3 reed, each 25″ long; one spoke of No. 3 reed, 13″ long; sixteen spokes No. 3 reed, 11″ long; many No. 2 weavers and thirty-three small wooden beads. Soak the reeds. Begin exactly the same as in weaving the mat (Part VII, page 48). Weave to a five-inch diameter. Add the sixteen 11″ spokes, one at the right of every spoke except the odd spoke. Separate the spokes with one round of triple weave, as follows: lay three weavers back of three successive spokes, and out on the basket. Place the first weaver over the second and third, and back of the fourth spoke, then out on the basket. Place the second weaver over the third and first, back of the fifth spoke, then out on the basket. Place the third weaver over first and second, back of sixth spoke, then out on the basket. Continue in this way until one round is complete. With round nose pliers pinch each spoke, close to the weaving. Make three more rounds of triple weave, bending spokes in position for sides of basket. Cut off the ends of the three weavers. Place a bead on each spoke. Weave twenty-five rounds of single weave, pulling spokes *in* a little. For the edge, pinch the spokes. Soak them. Follow process illustrated in Figs. 1 and 2.

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CHAPTER VI

CONSTRUCTIVE DESIGN

Suggestions to Teachers

A New Definition of Art: Art has been defined as the ability to answer, in terms of beauty, a human need. We see how wide an application of the art idea is here implied. In the light of this interpretation, we are to look for art in the utensils of the kitchen, as well as in the paintings in a gallery, for both are attempts to answer human needs. We have been accustomed to think of art as expressed solely in pictures, statuary, architecture, and in other "fine" ways, not intimately connected with our daily problems; but we are slowly learning that a man's love of art or his ignorance of art is expressed, whether he knows it or not, in his house, in his dress, in the arrangement of his workshop or office, in his letterheads, in his choice of pastimes, in the laying out of his garden, in short in every activity and manifestation of his life. Therefore, every man or woman, as an individual, needs to know the fundamental principles of form and color, for form and color he must use, as inevitably as he uses speech.

Art in Manual Training: For many years the teachers of Manual Training in our schools paid little attention to matters of art. In school systems where both art and manual training were taught under competent supervision, there was a wide separation of effort and a total disregard on the part of each department of the aims of the other. The futility of such an arrangement now seems clear. Art needs construction of every kind, as a medium or carrier for its message; and manual training needs art to place it in the realm of beauty. This is the lesson that not only our schools but our nation must learn. Art must find its beginnings in the needs of the people; and if America is ever to secure artistic things from industry, it must come through the acceptance by industry of the necessity for appreciation of the beautiful. Art schools must recognize present day conditions, and must train their students to meet them.

Color Printing in the School Room: One of the many ways in which art and manual training may meet on common ground is illustrated by the problem in color printing, presented on pages 52 and 53. Here, the making of the register board and the manipulation of the "press"—which is the prosaic clothes wringer, brought to school—are problems which engage the interests of construction. The cutting of the block, with skill and precision, might also be classed as a manual training exercise. Yet how could the manual training teacher dispense with the art quality, so evident in the printed result? Surely not more than the art teacher could dispense with good workmanship in the use of constructive materials and tools! When the simple device of color printing is mastered, the students will print, in colors, book covers, magazine covers, invitation cards, school programs, Christmas cards, calendar covers and a host of other things which have not only practical uses, but in many cases a decided commercial value.

Exercises in Painted Wood: Imagine the waste basket or the wooden box (pages 54 to 56) without the color and the decorative design! It was the presence of these factors that led a mother to exclaim: "O, I am so glad that at last in the schools the children are making something that somebody wants!"

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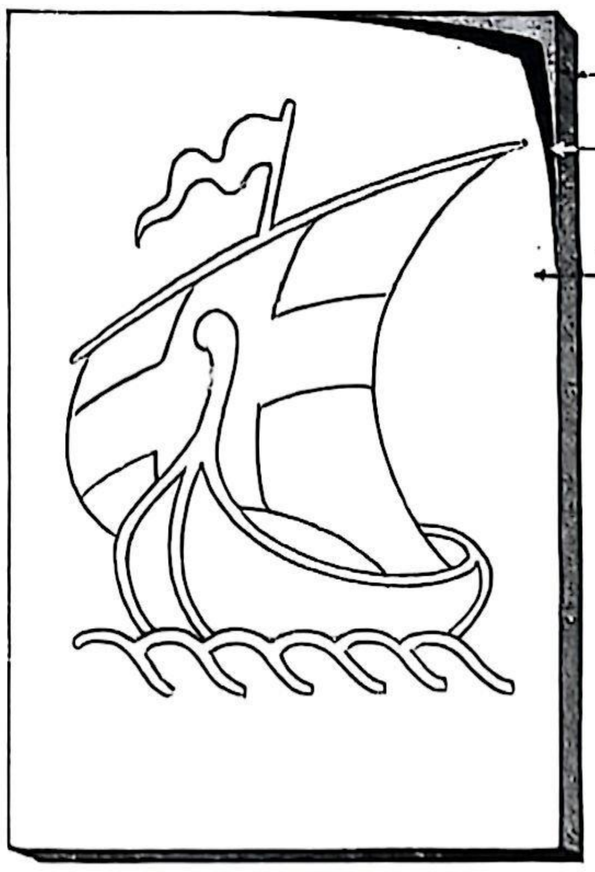
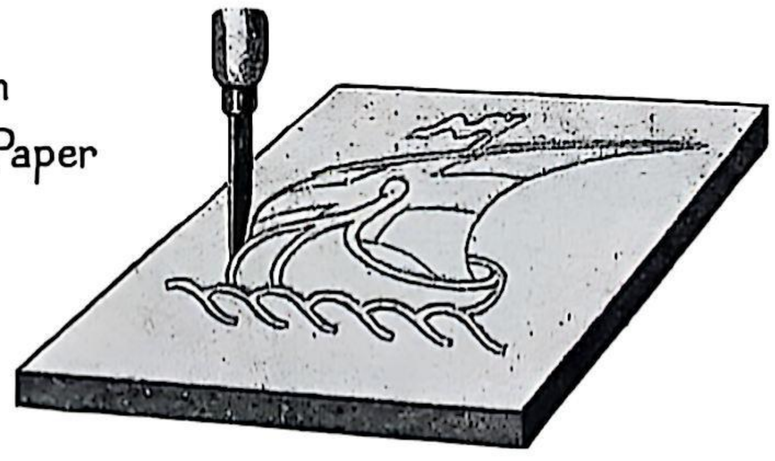
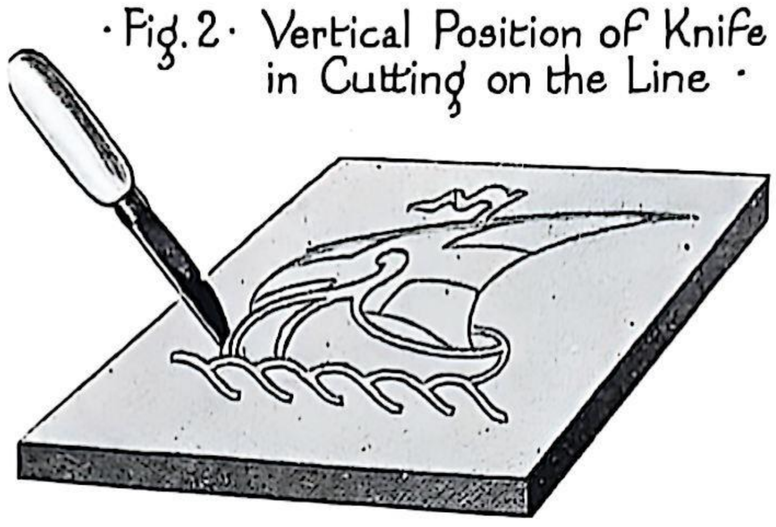


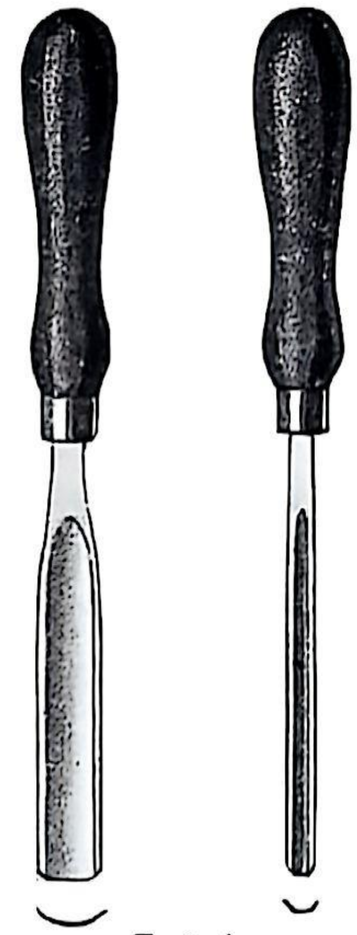
· Fig. 1 ·
Method of Tracing Design on Linoleum



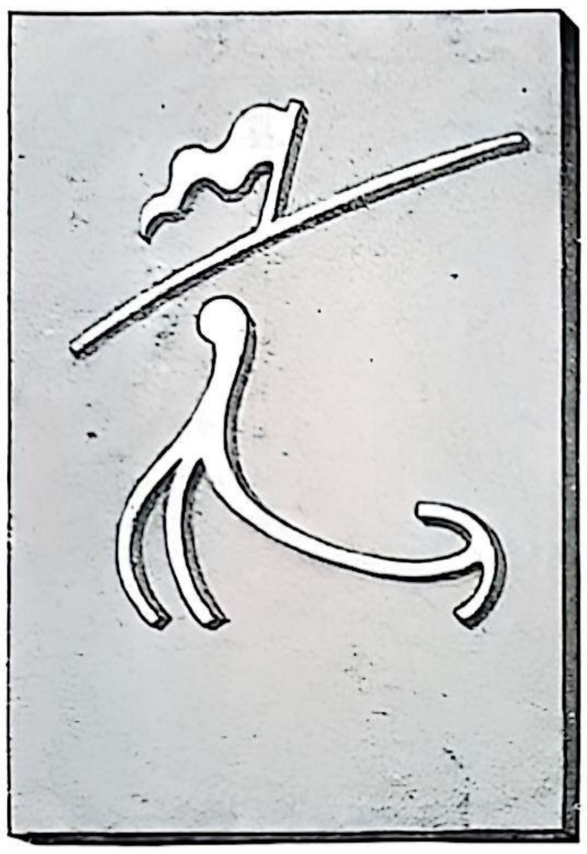
· Fig. 2 · Vertical Position of Knife in Cutting on the Line ·



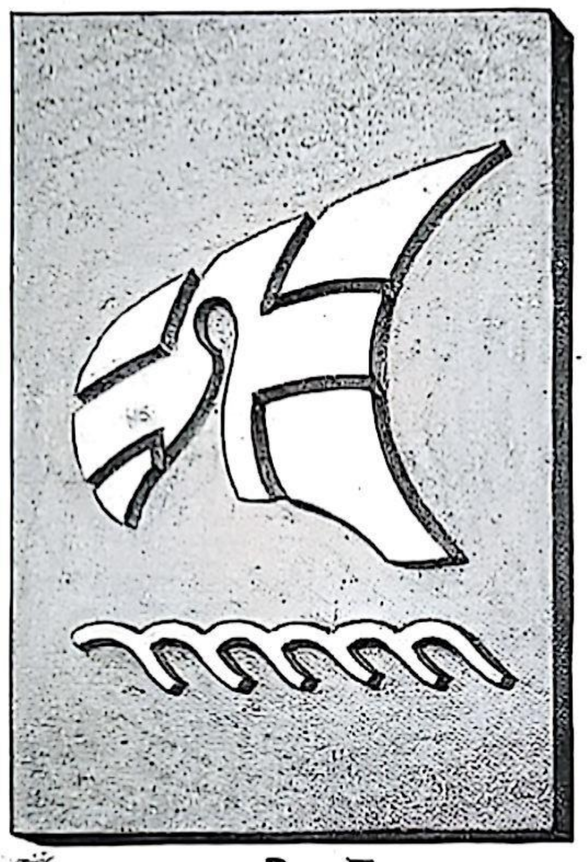
· Fig. 3 · Oblique Position of Knife in Cutting against the Line



· Fig. 4 ·
Engravers' Gouges for Routing out Background



· Fig. 6 ·
Block No 1 Cut for Printing



· Fig. 7 ·
Block No 2 Cut for Printing

· Fig. 8 ·
Method of Applying Opaque Water Color to Block No 1 ·

Constructive Design: The Preparation of Linoleum Blocks for Color Printing. As many different blocks must be cut as there are to be colors in the printing. The design shown in Fig. 12, page 53, was printed in two colors (white and orange) on black paper. Fig. 1 shows the design traced from the drawing, placed over carbon paper and laid in position for tracing on the linoleum block. That part of the design that was to be printed in orange was first cut on a block (Fig. 6). Observe that the background is cut away, leaving in relief the portion to be printed. On another block another tracing was made, and the parts to be printed white were left in relief. Figs. 2 and 3 show the position of the knife in cutting the line and in cutting to remove the background. A gouge (Fig. 4) is a convenient tool for removing large portions. Fig. 8 shows the method of applying opaque water color to one of the blocks.

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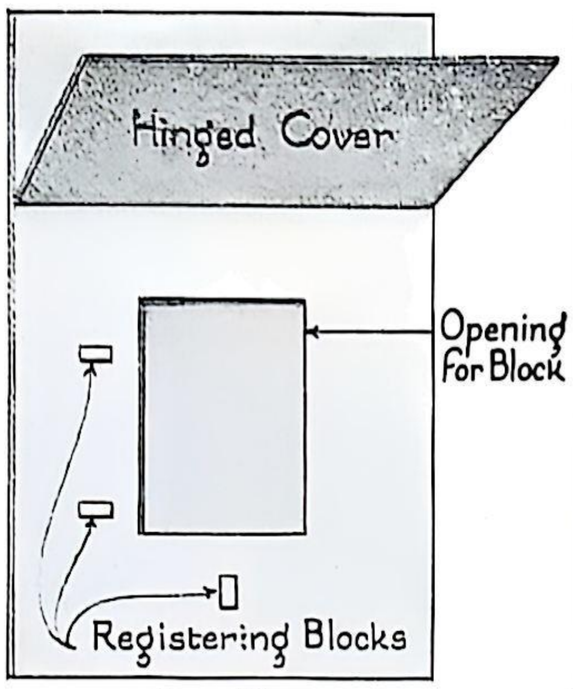
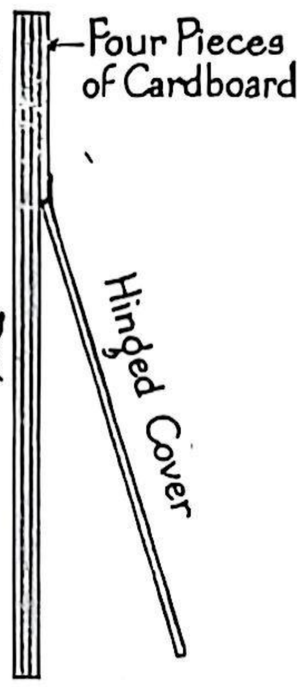


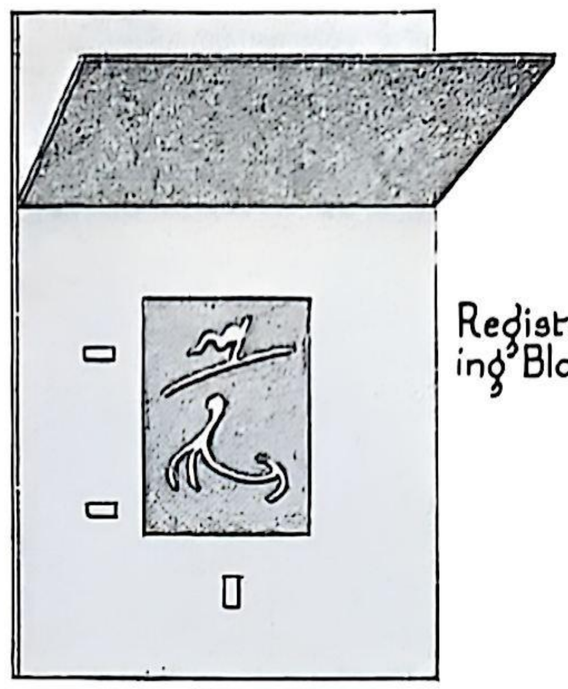
Front View



Edge View

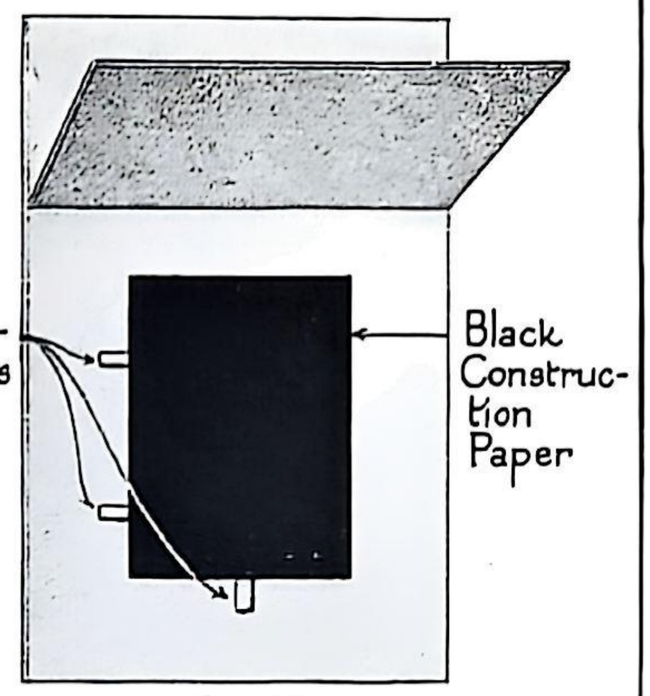
· Fig. 8 ·

Register Board Made of Four Thicknesses of Cardboard Glued Together



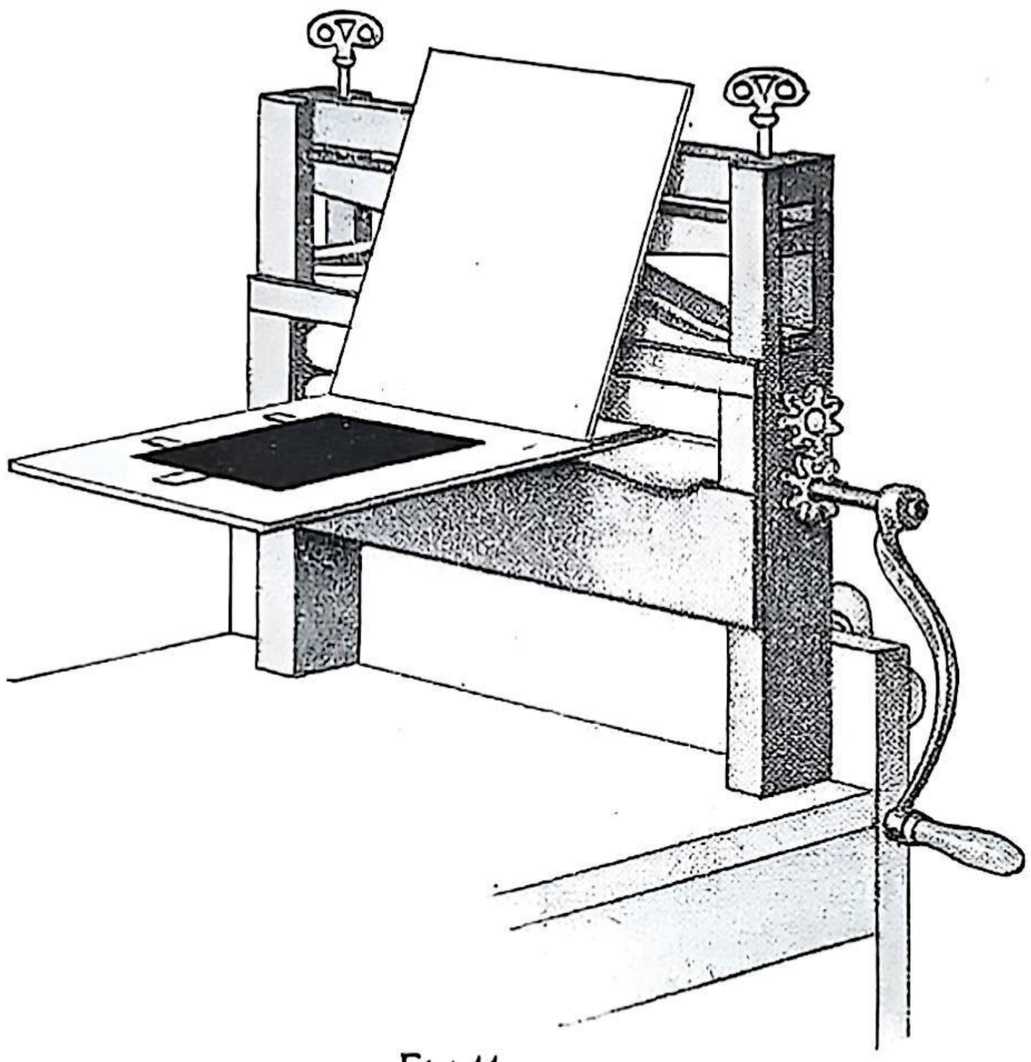
· Fig. 9 ·

Block Nº 1 in Position for Printing



· Fig. 10 ·

Paper Held in Position by Registering Blocks



· Fig. 11 ·

Register Board Placed in Position for Printing Between Rollers of Clothes Wringer

· Fig. 12 · The Printed Design

Constructive Design: A Method of Color Printing in the School Room. Fig. 8 shows the construction of a register board that is easily made. The "registering blocks" shown in the front view are tiny pieces of cardboard, glued accurately in place, to hold the paper straight for printing. In printing one color, the linoleum block with the paint spread on the raised parts is put into the depression on the register board. Then the surface to be printed is laid over it; being held in place by the registering blocks (Fig. 10). Fig. 11 shows the method of printing. The cover shuts down as the rollers revolve. The board is passed through the rollers once, then back again.

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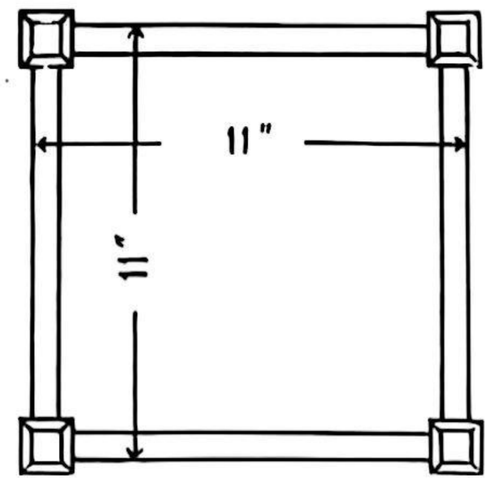
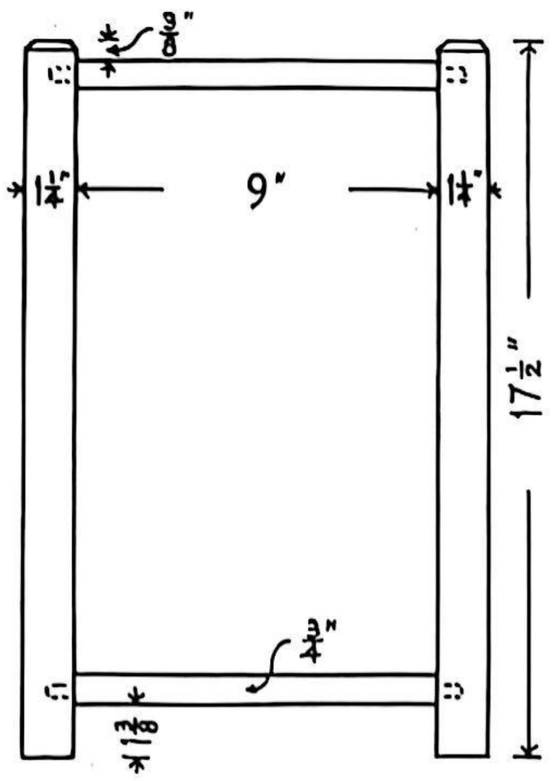
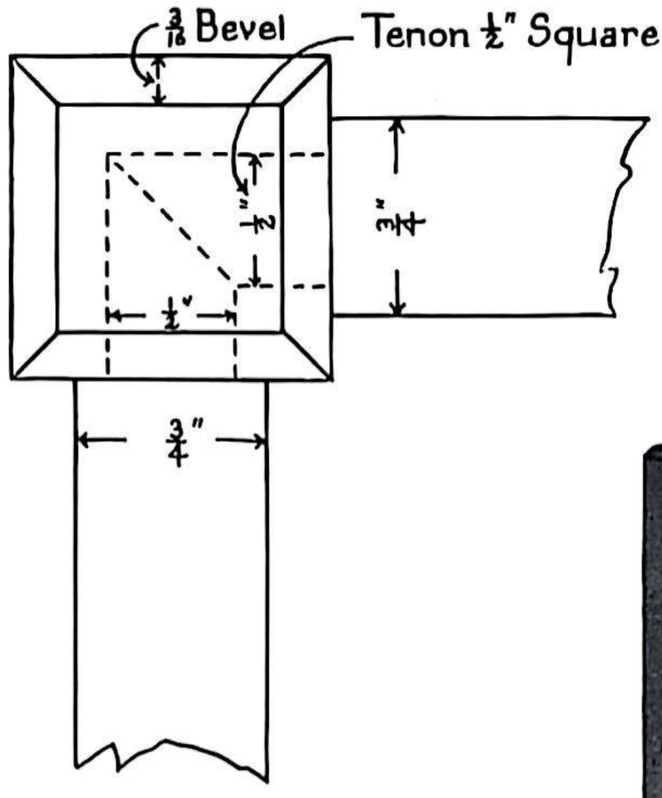




· Fig. 1 ·

Working Drawings for Frame of Waste Basket



· Fig. 2 ·

Detail Drawing of Mortise and Tenon Joints

· Fig. 3 ·

Perspective View of Frame

Constructive Design: The Construction of a Waste Basket. A waste basket that is simple in construction, inexpensive and highly decorative in appearance is shown on page 55. Figs. 1 and 2 on this page show the construction of the frame, which is made of whitewood stock. The frame when finished should be painted, first with an underlay or filler, and then with black enamelac.

The sides of the basket are of heavy cardboard. These boards should be cut in the dimensions indicated in Fig. 1, page 55. (The nine inch width may be cut a little "shy," so that there will be no bulging out, when the cardboards are fitted in place). The cardboard panels are to be decorated with a painted design, first drawn on paper and then transferred to the boards by tracing. Any design desired may be selected. Three suggestions are given. The designs painted on the four sides should all be alike, or else very similar, varying only as much as the two decorative landscapes vary, in the basket illustrated. The color schemes should also be alike or very similar, for the basket must be harmonious with the general scheme of the room in which it is placed.

After the chosen designs are traced upon the cardboards, the shapes are to be filled in with opaque water colors. Remember that it is wise to secure first a balance of light and dark, adding color tones to a composition that is already balanced. The panel or shape inclosing the design should be strongly outlined, and a marginal band of color should be painted on the edges of each cardboard. The panels are held in place by small tacks at the top and bottom. A square piece of cardboard is tacked to the lower part of the frame, for the bottom of the basket.

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· Fig. 1 · Three Suggestions for Decoration of the Cardboard Panels

· Color Scheme ·

Sky – Light Green
Trees – Blue Green
Tree Trunks and
Water – Blue Violet
Foreground – Green
Moon – Yellow

· Color Scheme ·

Sky – Light Green
Trees · Dark Blue Green
Distant Trees – Blue
Tree Trunks – Gray Blue
Foreground – Green
Moon – Orange

Constructive Design: The Basket Finished with Decorated Cardboards.

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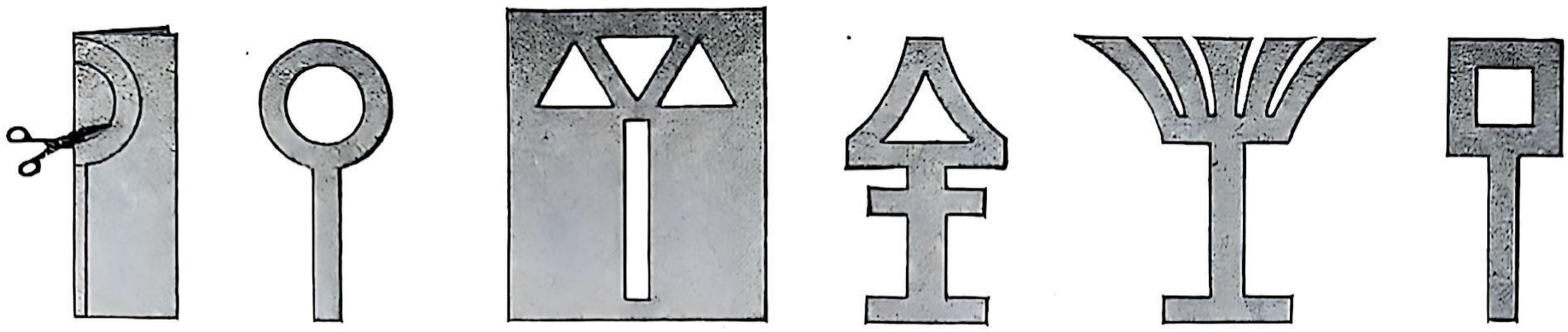
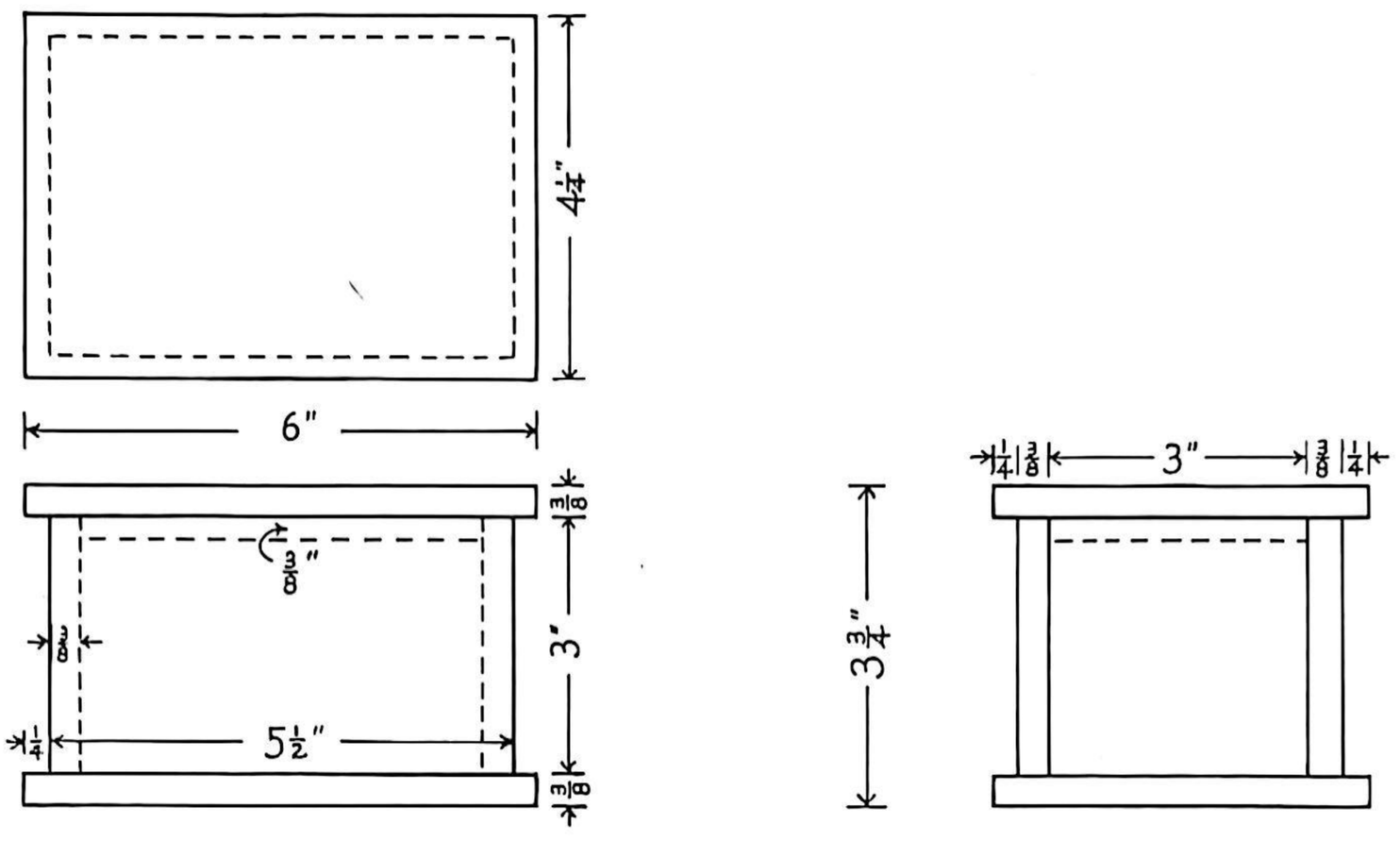


· Fig. 1 · Development of Design Units thru Paper Cutting



· Fig. 2 · Working Drawing of Treasure Box

Constructive Design: A Treasure Box Made of Wood and Decoratively Painted. This box was made of whitewood. Black enamel was applied to the outside of box and cover, and when this was dry, the top was laid off in half-inch squares, with a ruler. This was the basis for the design which was painted in green and white on the cover. The structural design for the sides was spaced by means of a paper pattern.

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CHAPTER VII

OBJECT DRAWING

Suggestions to Teachers

Objects in One Point Perspective: When a rectangular object, typified by the cube, is placed directly in front of us, so that the center of the front face is exactly opposite the eye, we see the actual shape of that face. Its appearance is not affected by perspective, except that it may appear smaller if it is moved farther away. When the object is lowered, so that the top is brought into view, perspective immediately enters into its representation. Fig. 1, page 58, illustrates this position. The top face of the cube is foreshortened, just as the top face of the cylinder appeared, in a similar position. The back edge of the top, being farther away, appears shorter than the front edge. Hence the two side edges, which connect the front and back edges, must be drawn as slanting lines. Experience has shown that these two slanting edges will meet, if produced, at a point opposite the eye, on the horizon line. This line is represented as "Eye Level" in Fig. 1, page 58. The point where the converging lines meet is called a vanishing point. All objects drawn with the use of but one vanishing point are said to be in one point perspective. The use of a wooden model or of a paper made cube in demonstrating these facts of appearance is sometimes helpful. But experience has justified the use of such diagrams as appear in the following pages instead of the paper model. Drawing the diagrams from dictation or from the printed page has seemed a clearer, surer way of arriving at results. The subsequent exercises in object drawing, based on the understanding of the diagrams, have fully warranted the use of this method.

The Use of the Diagrams: The pupils should prepare several sheets of 9″ x 12″ manila paper, ruling an "Eye Level" on each about two inches below the upper edge of the sheet. They should then copy the diagrammatic cubes in red crayon, modifying the proportions afterwards to express the various objects with black crayon or pencil. After this practice, they should draw other familiar objects in one point perspective.

Objects in Two Point Perspective: When a rectangular object is turned, so that two vertical faces are seen, we find that there are two sets of parallel lines seeking two different vanishing points. Lines that seem to "go away" or retreat into the distance, are called retreating lines. Fig. 1, page 60, illustrates this. The cube is placed in front of the observer, with two sides turned equally away. The two vertical faces are equally foreshortened. Their retreating edges seek two different vanishing points. The point on the Eye Level exactly opposite the observer is called the Center of Vision (C. V.). When the cube is turned at 45 degrees, the two vanishing points are equally distant from C. V. The diagrams on page 60 should be copied in larger size, and other rectangular objects drawn, in similar positions.

Other Phases of Two Point Perspective: Rectangular objects are often seen turned at angles other than 45 degrees. That is, we often see more of one face of an object than we do of another. Fig. 1, page 61, illustrates this. The cube shows more of its right face than of its left face. The narrower face shows a greater degree of inclination, in its retreating lines. Therefore, the vanishing point on the left is nearer to C. V. than the vanishing point on the right.

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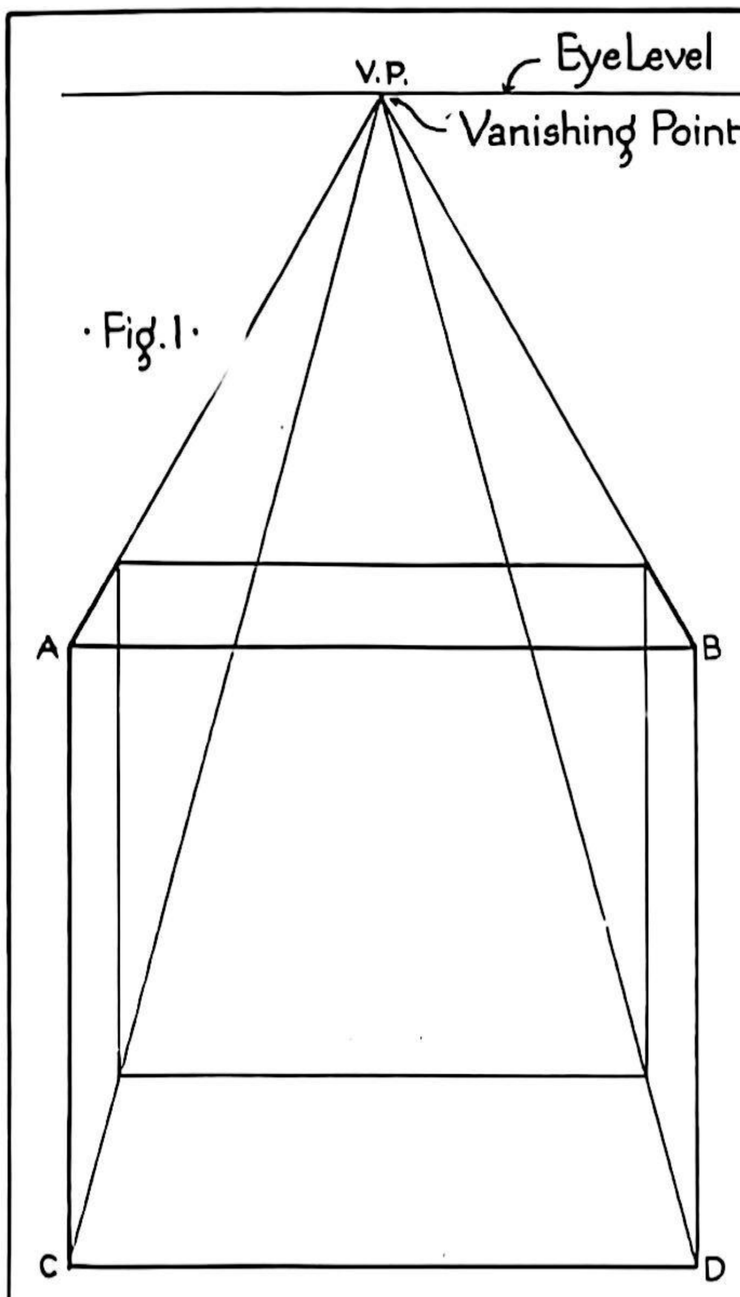

Fig. 1

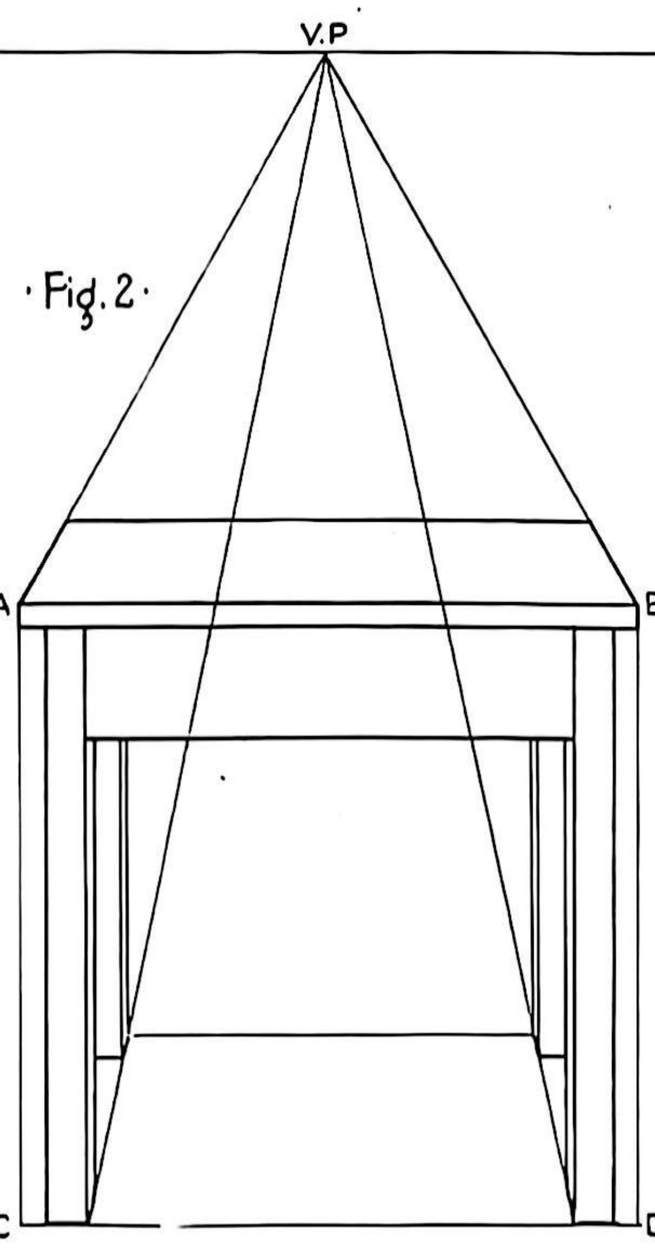

Fig. 2

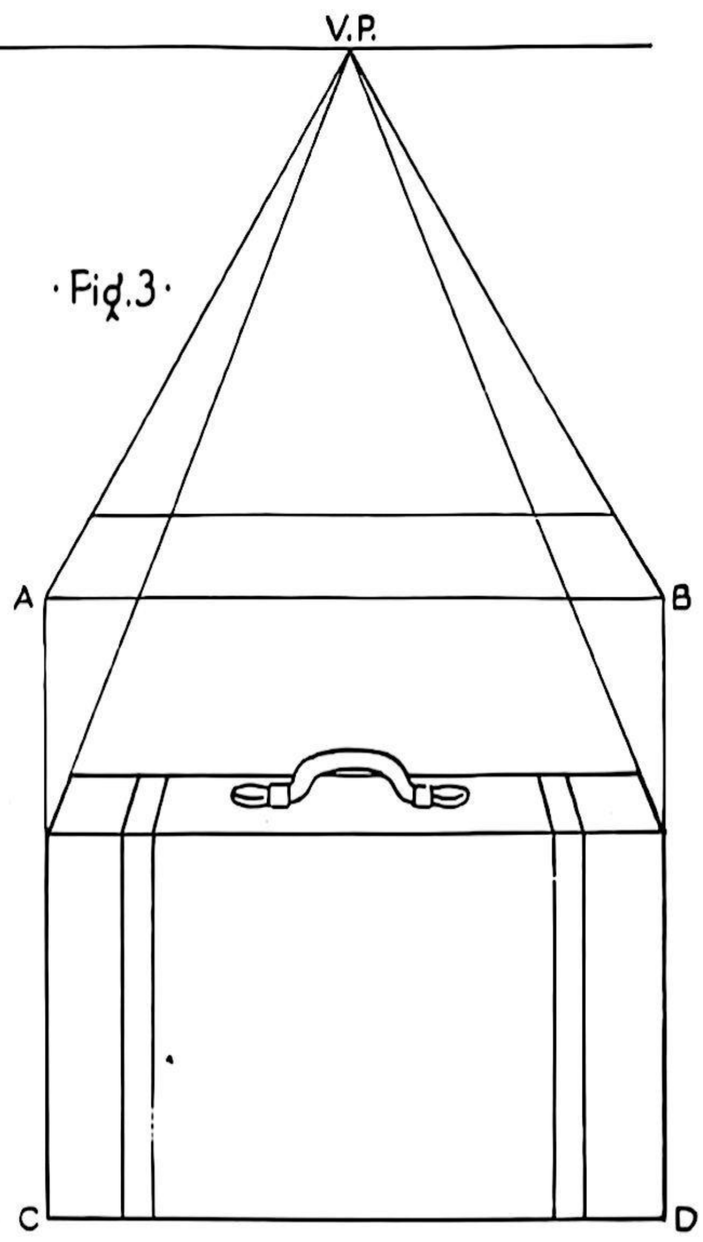

Fig. 3

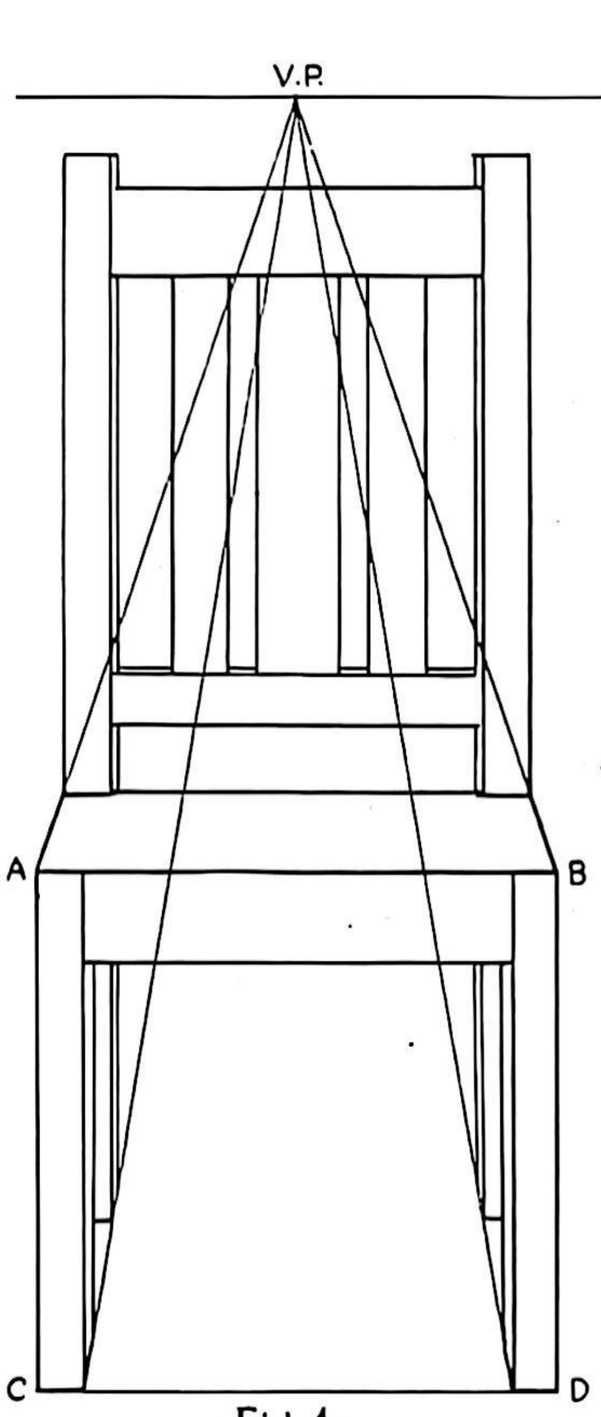

Fig. 4

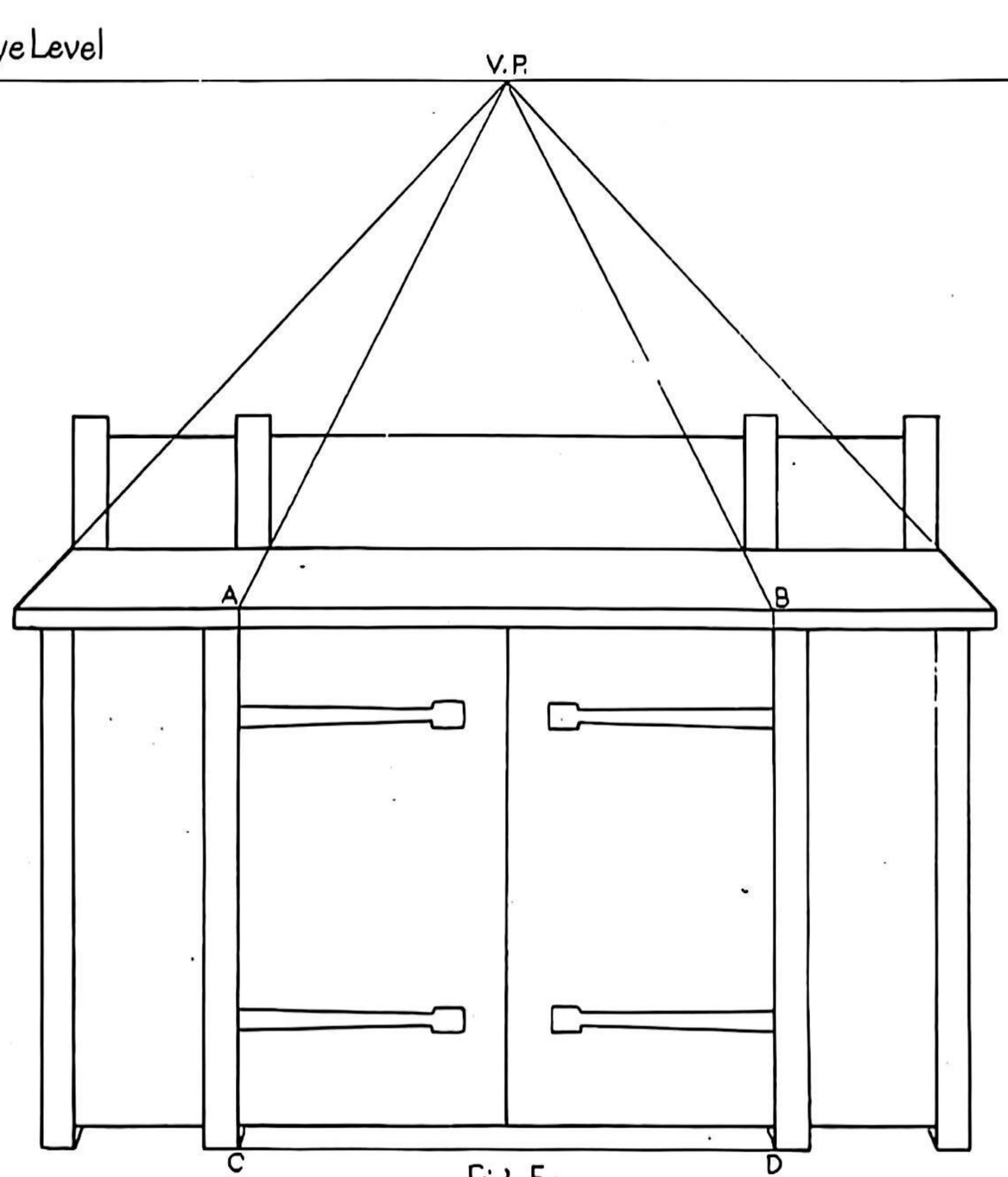

Fig. 5

Object Drawing: The Cube and Related Objects in One Point Perspective.

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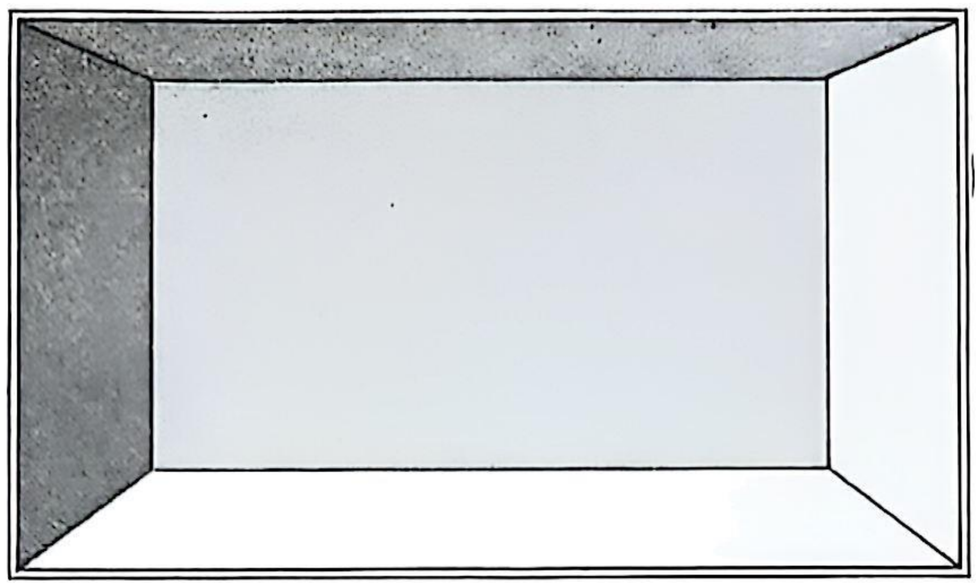
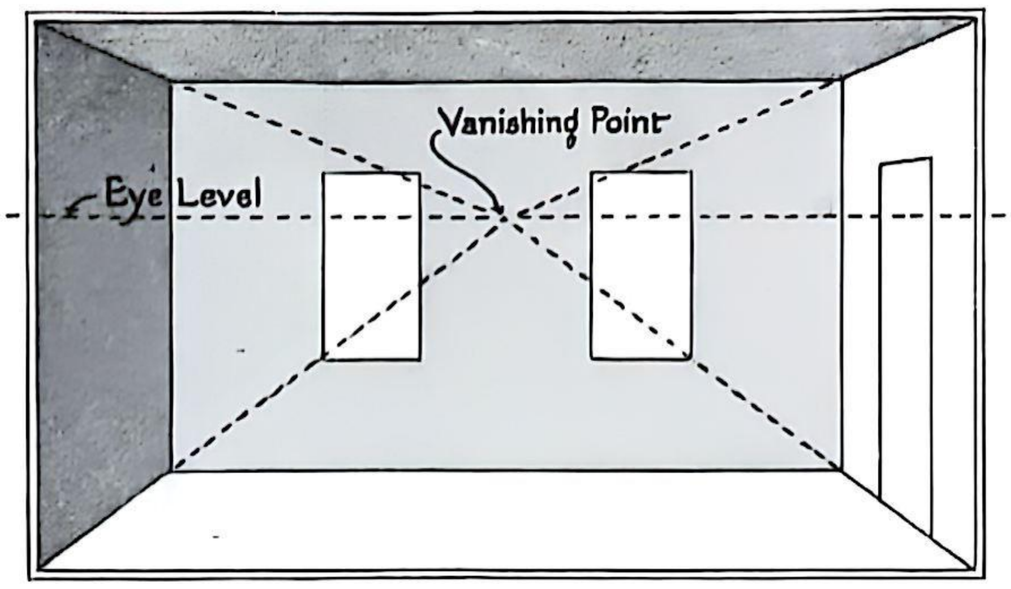
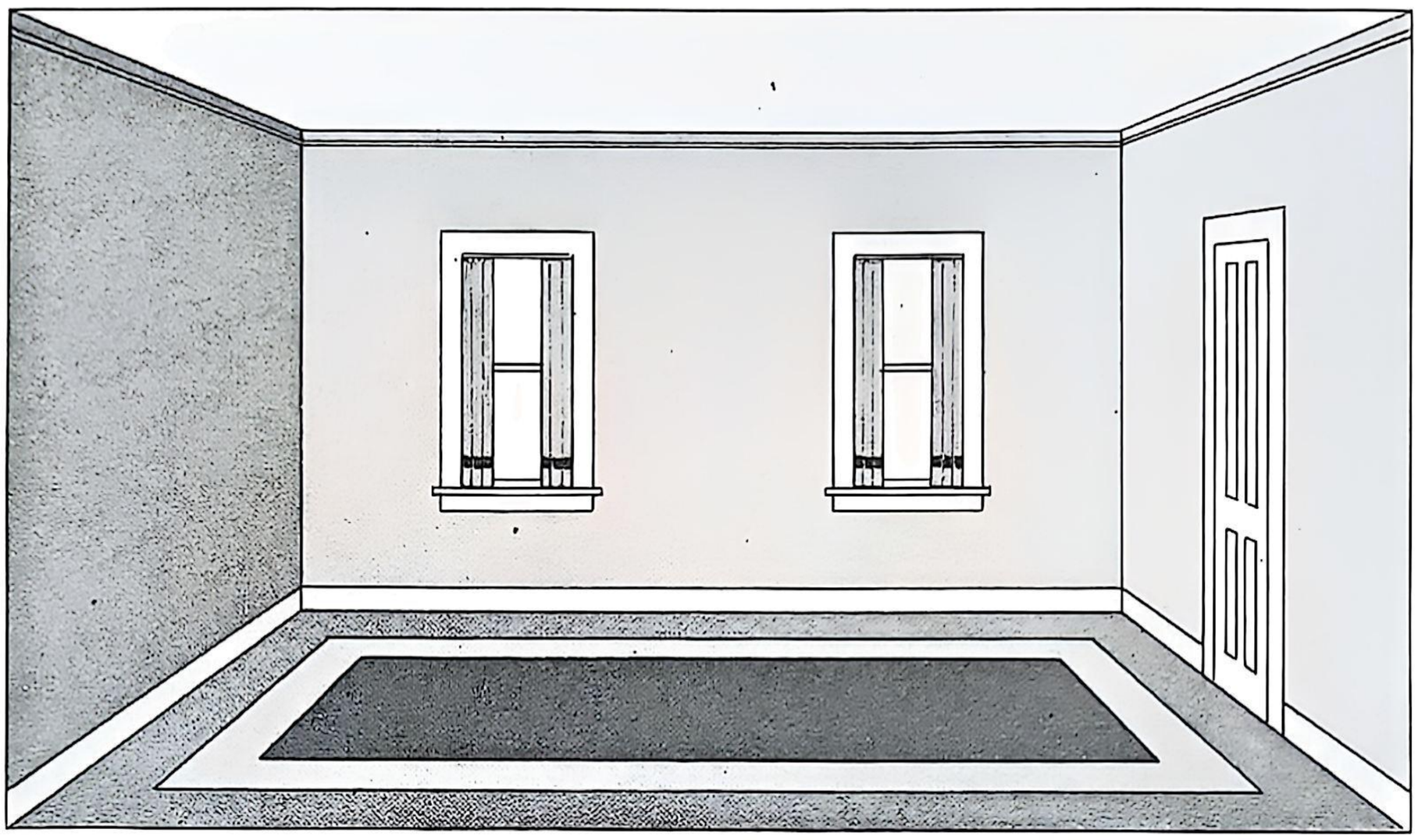


· Fig. 1 · Inside of a Rectangular Box with the Top Edge Above Eye Level



· Fig. 2 · Inside of Box Related to Room Interior



Object Drawing: A Room Interior in One Point Perspective. In this open box, we see all the essential lines of a room: the floor, the ceiling, the side walls and the back wall. If we cut two rectangles of white paper, of the proper size to represent windows, and paste them on the bottom of the box (which represents the back wall) we shall find the resemblance to an actual room much increased. Fig. 2 represents a drawing from such a box. A horizontal line representing the Eye Level has been drawn, and the vanishing point located upon it, exactly opposite the eye of the supposed observer. Those retreating horizontal edges seen above the eye level, seem to slant down. Those seen below the eye level seem to slant up. The depth of the box or room is indicated by the placing of the two vertical lines that suggest the back corners. The tops and bottoms of these lines are connected, thus finishing the drawing of the back wall. The large drawing on this page looks quite like a room interior, yet no principle is used that is not found in the open box.

Make a drawing of a room, in one point perspective. Change the arrangement of windows and doors to express some room that you have seen.

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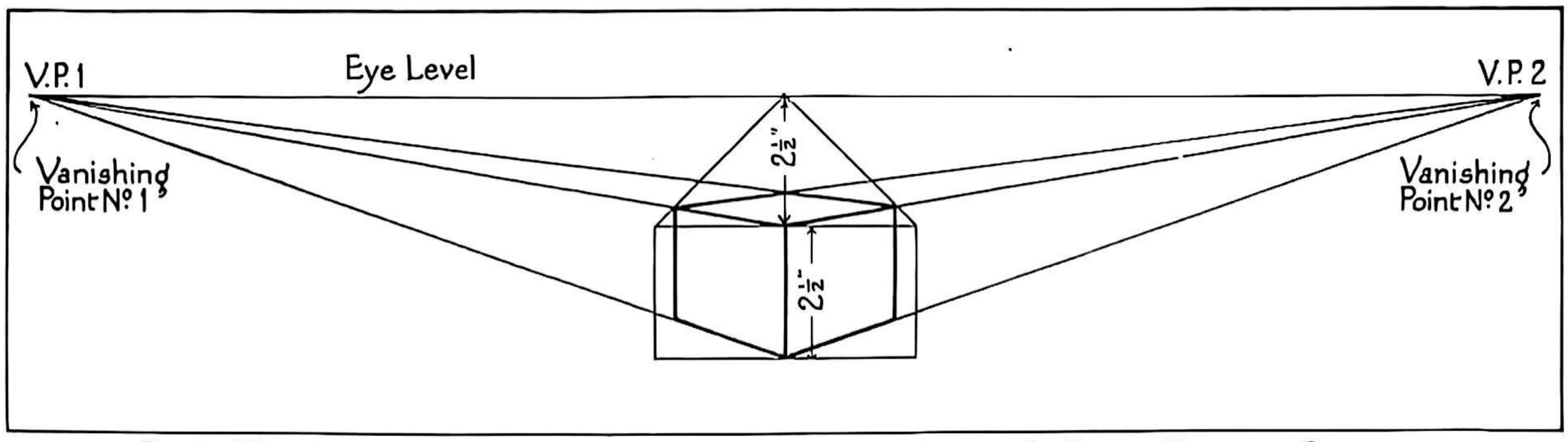
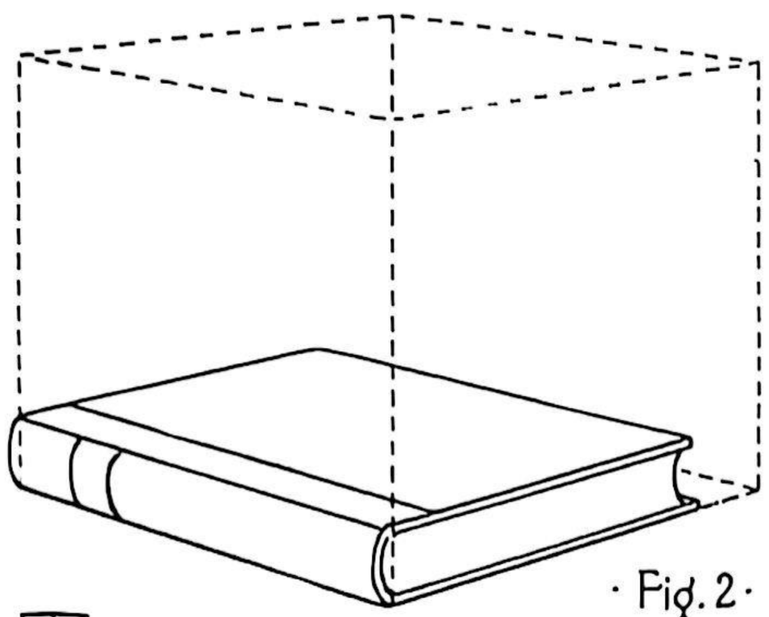
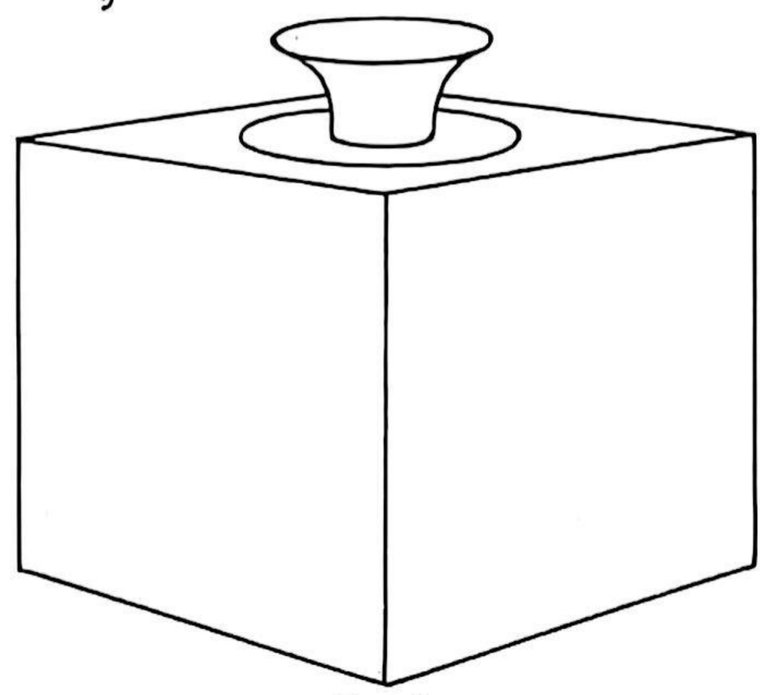


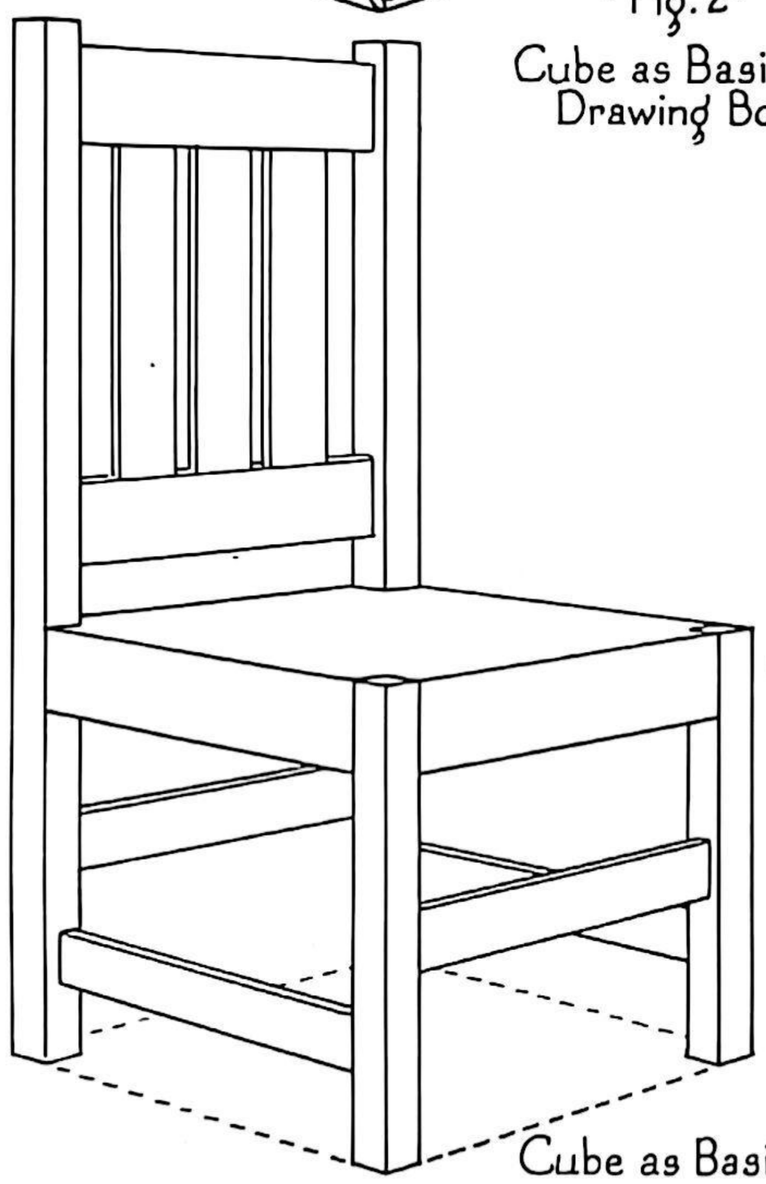
· Fig. 1 · Two Pieces of 9x12" Paper Pasted Together to Secure Sufficient Distance Between Vanishing Points 1 and 2 for Diagrammatic Drawing of Cube at 45° . . . .



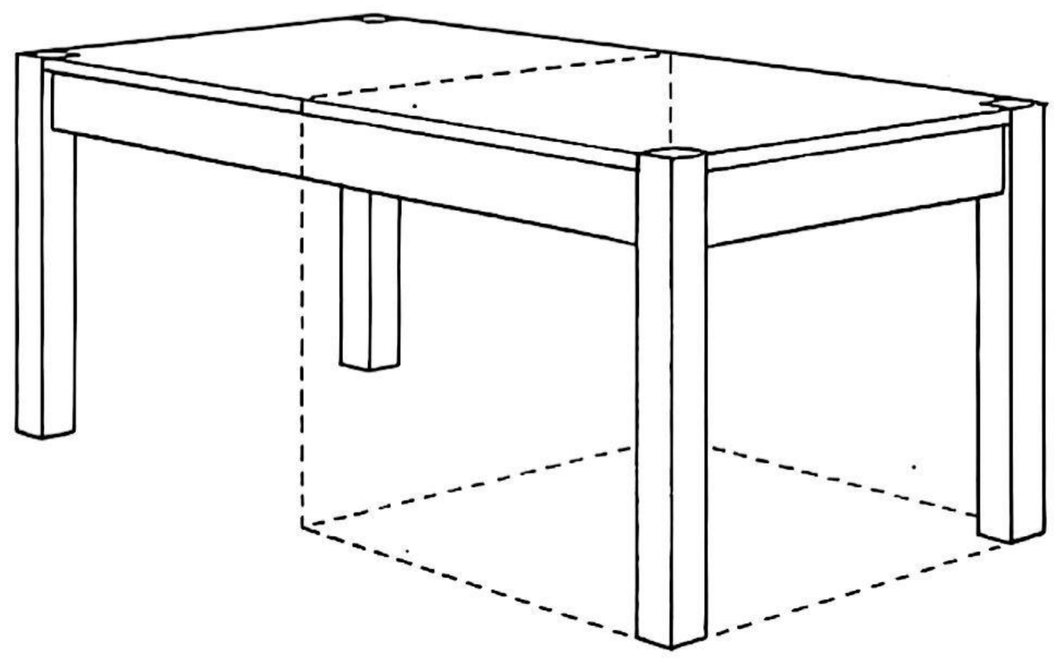
· Fig. 2 ·
Cube as Basis for Drawing Book



· Fig. 3 ·
Cube as Basis for Drawing Ink Well



· Fig. 4 ·
Cube as Basis for Drawing Chair



· Fig. 5 ·
Cube as Basis for Drawing Table

Object Drawing: The Cube and Related Objects at Forty-Five Degrees. When the object is turned so that the near vertical edge is exactly opposite the eye and the two side faces are equally foreshortened, we say that it is at forty-five degrees. Then the two vanishing points are at equal distances from the Center of Vision, which is a point on the eye level exactly opposite the eye.

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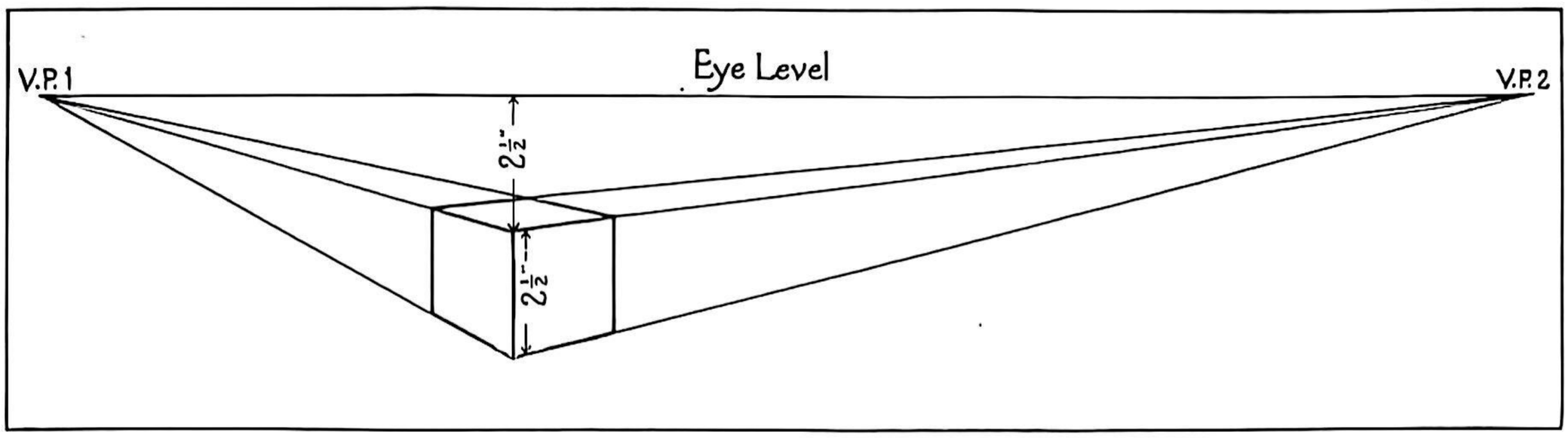
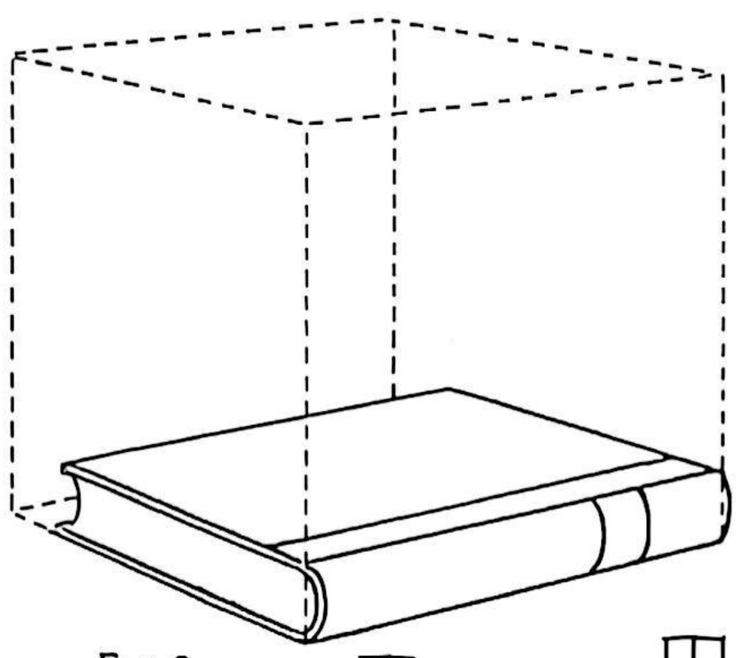
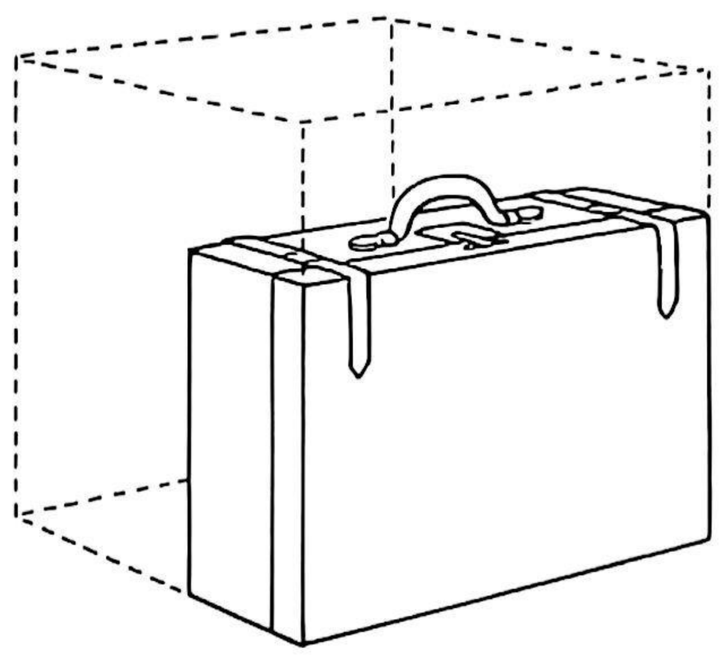


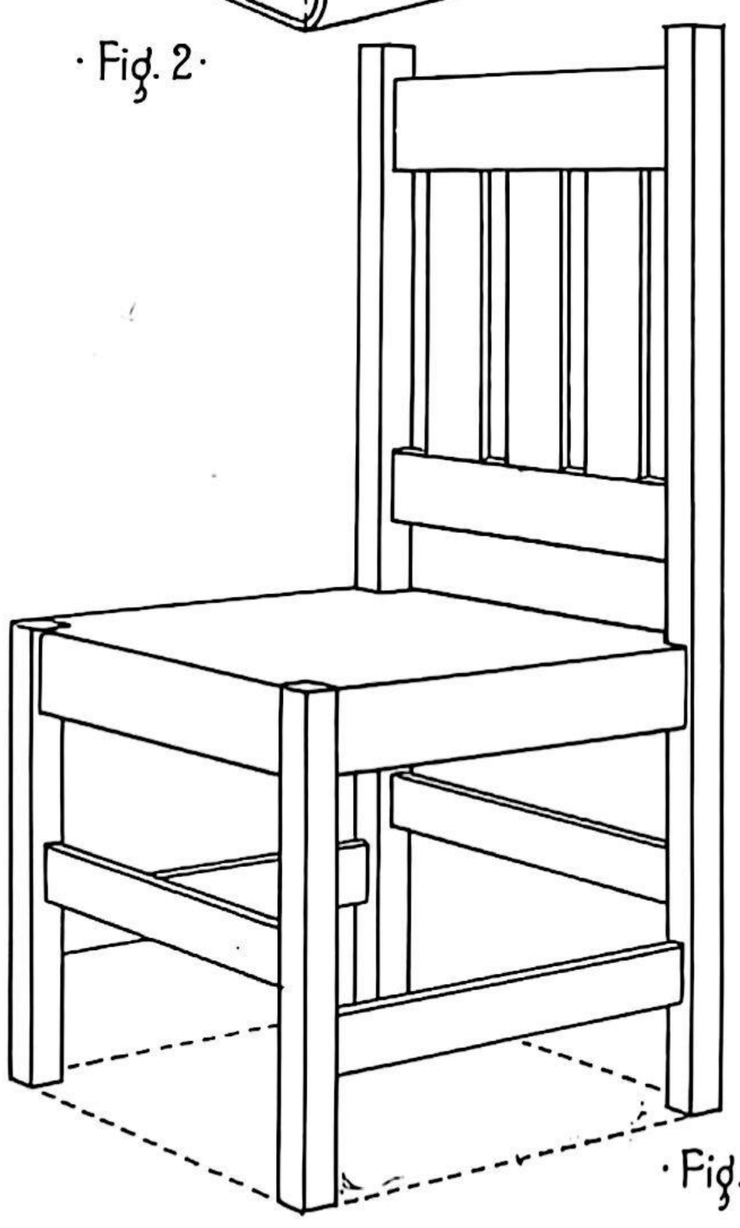
· Fig. 1 · Two Pieces of 9X12" Paper Pasted Together to Secure Sufficient Distance Between Vanishing Points 1 and 2 for Diagrammatic Drawing of Cube at Angles other than 45°



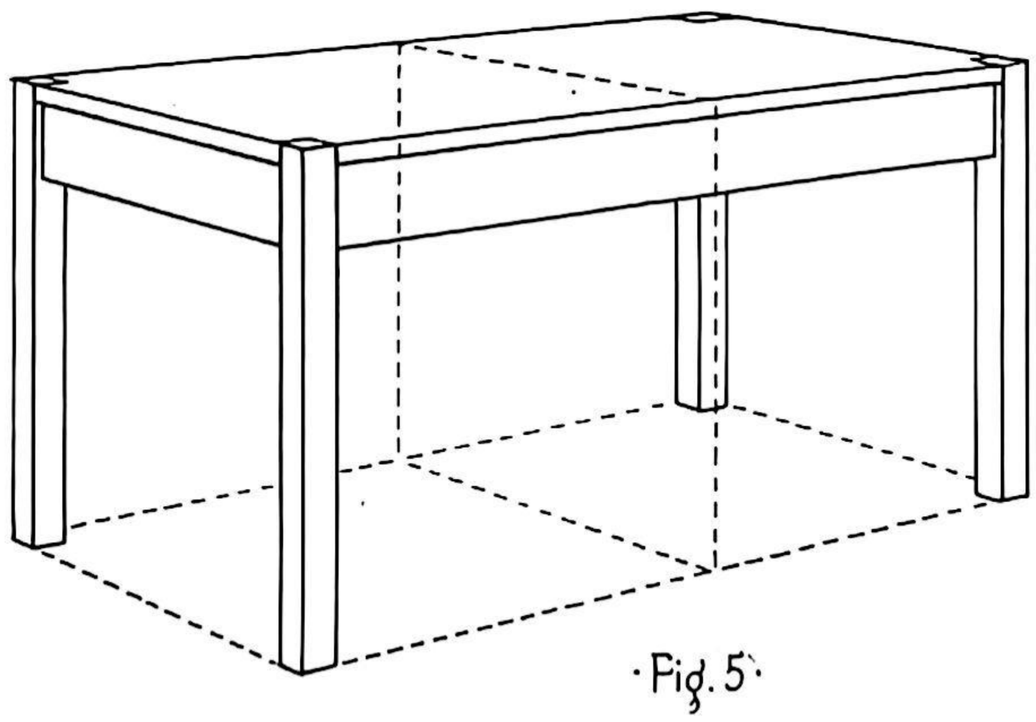
· Fig. 2 ·



· Fig. 3 ·



· Fig. 4 ·



· Fig. 5 ·

Object Drawing: Objects Turned at Angles Other than Forty-Five Degrees. When an object is turned so that the two side faces are unequally foreshortened, we still use two vanishing points, but they are at unequal distances from the Center of Vision. The more the face is turned, the nearer to C. V. is the vanishing point.

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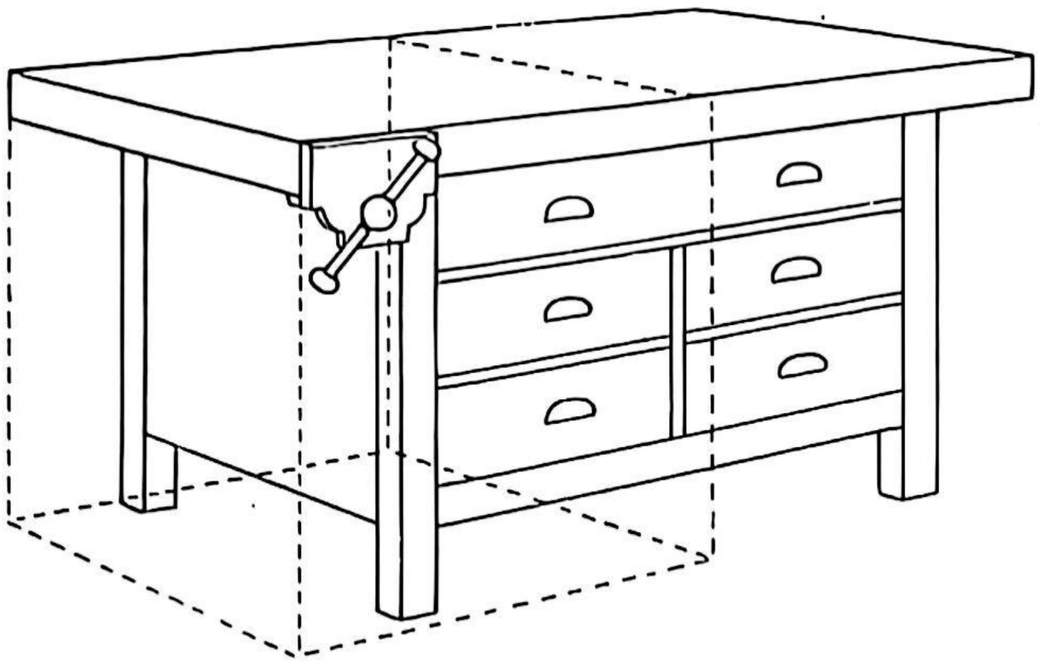
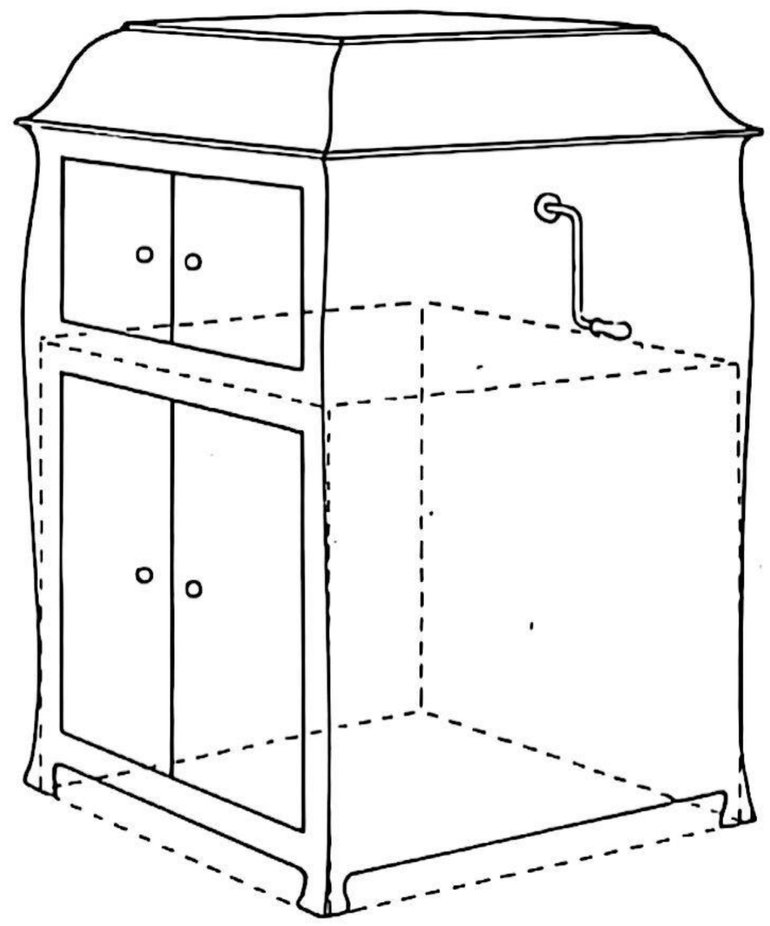
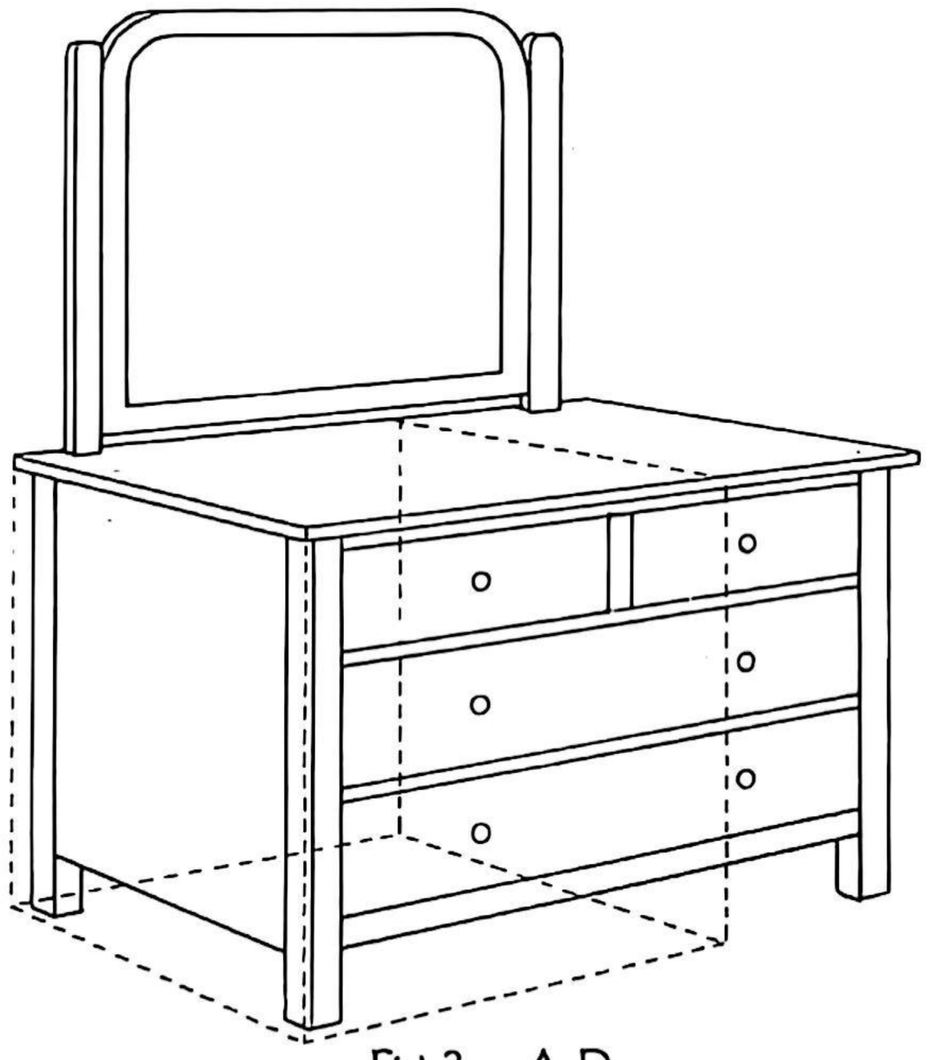


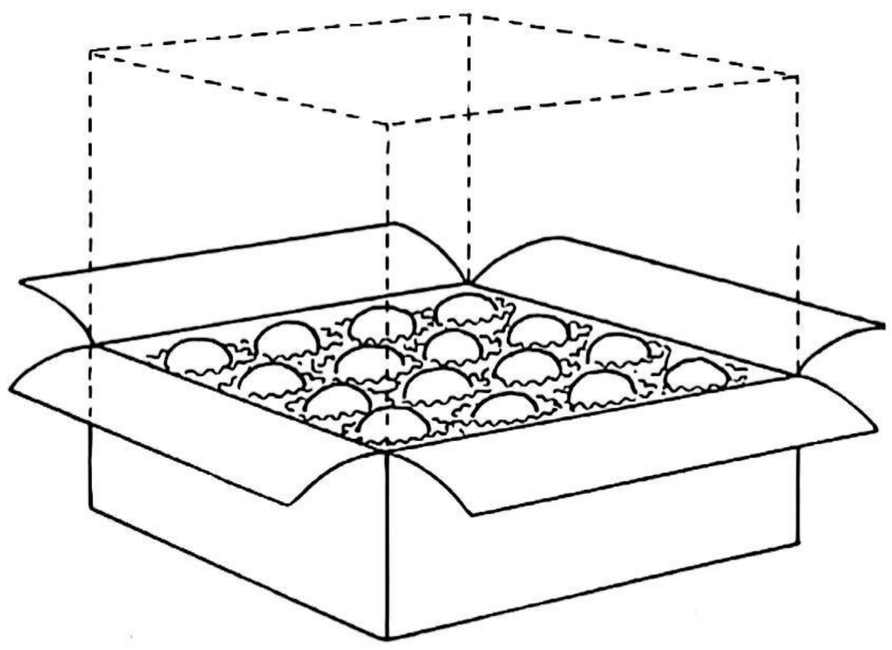
· Fig. 1 · A Work Bench



· Fig. 2 · A Victrola



· Fig. 3 · A Dresser



· Fig. 4 · A Box of Bon-bons

Object Drawing: Diagrams of Interesting Objects in Two Point Perspective. If we start with the drawing of a cube in correct perspective, it will be an easy matter to extend or to modify in other ways the lines that are necessary to express any rectangular object in a similar position. The workbench, the victrola, the dresser and the candy box are very different in sizes and proportions, yet the same diagram has been used, in drawing each of them. Note that in each the degree of foreshortening is greater on the right side than on the left. This necessitates a greater slant or inclination of the retreating lines on the right side of each object. Draw these diagrams in larger size, making the left sides show the greater foreshortening. Use a diagram like Fig. 1, page 61. Then make drawings of other rectangular objects of interest. Use the diagram of the cube in two point perspective, in each drawing.

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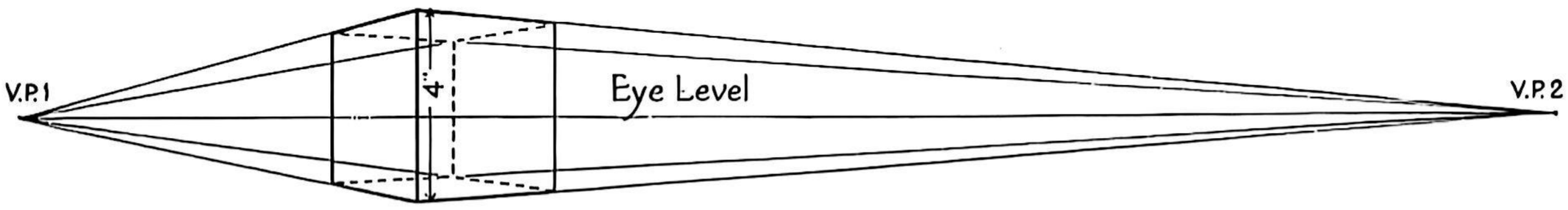
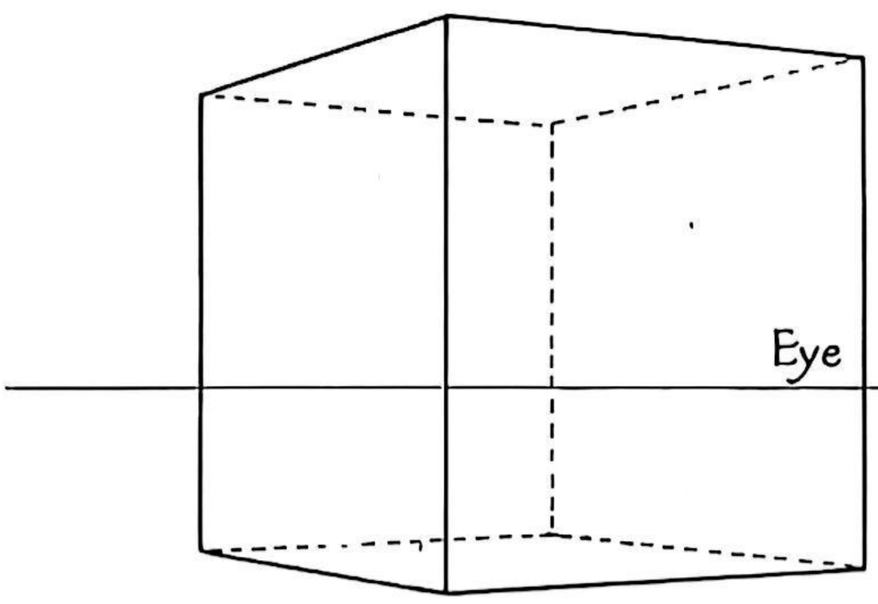
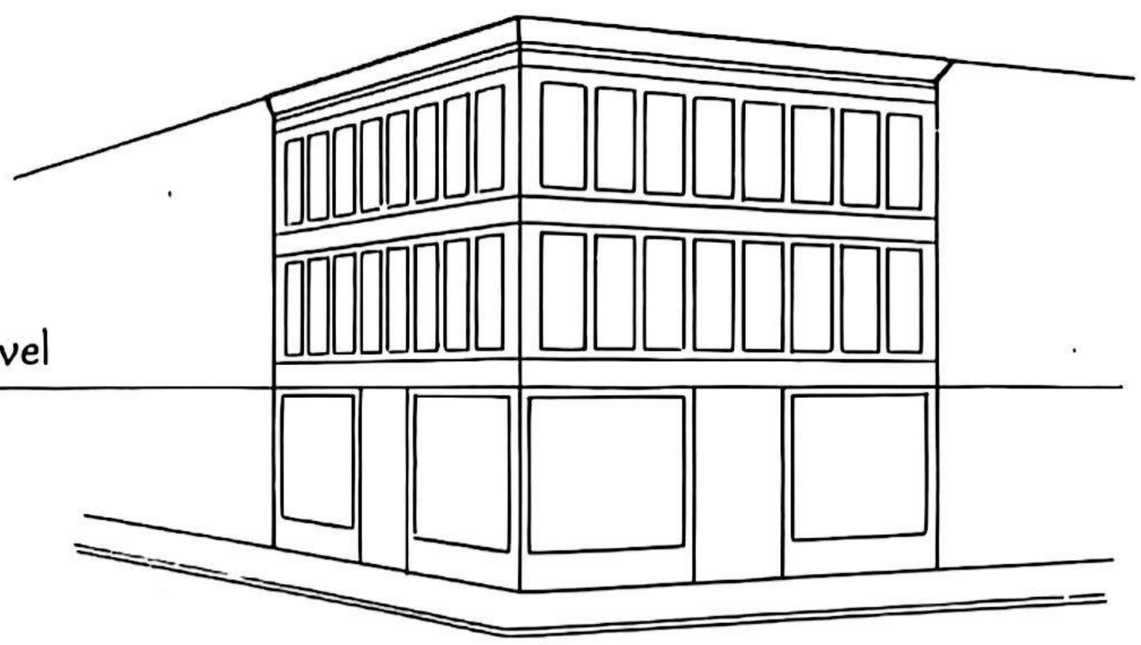


· Fig. 1 · Diagram of the Turned Cube with Eye Level Between Top and Bottom Faces

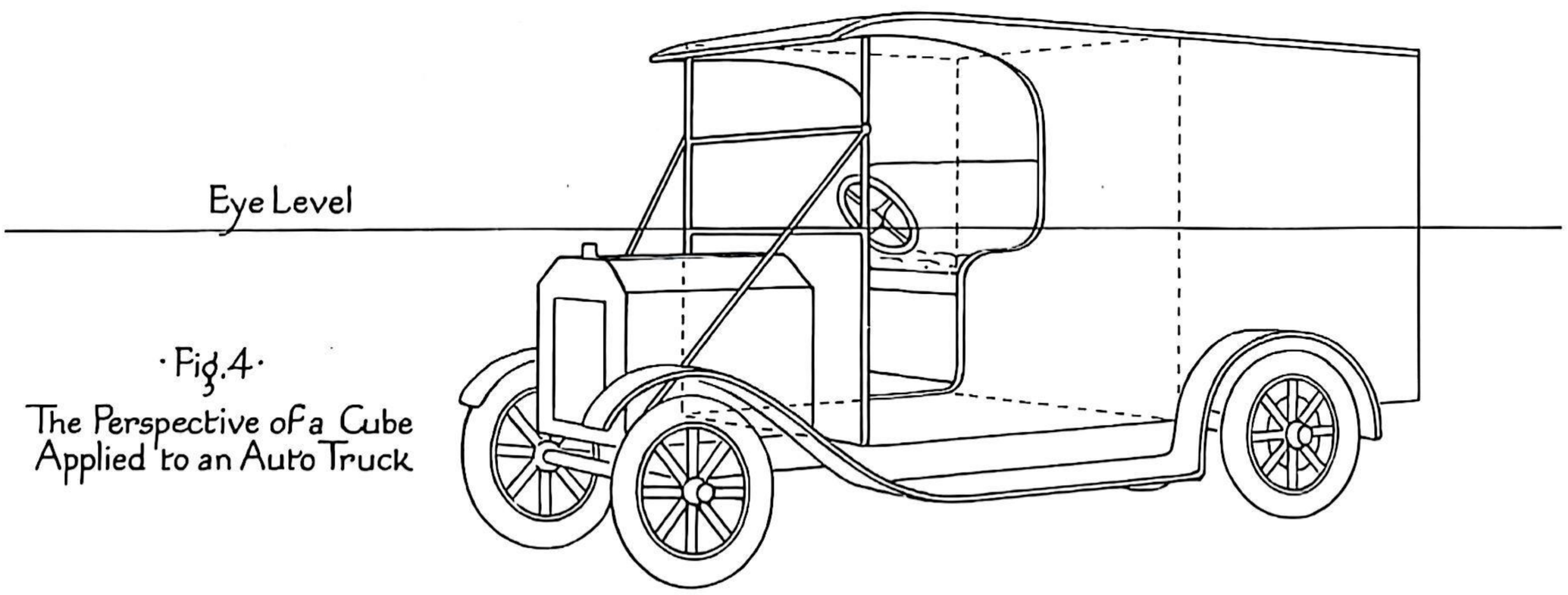


· Fig. 2 ·



· Fig. 3 ·

The Perspective of the Cube Applied to a Business Block



· Fig. 4 ·
The Perspective of a Cube Applied to an Auto Truck

Object Drawing: Perspective Principles Applied to Large Objects. Large objects are subject to the same laws of perspective that govern the representation of small objects. The only difference is that we generally see part of the surfaces and outlines of large objects above our eye level. Fig. 1 on this page is a diagram of a turned cube, with the eye level drawn through the middle. Note that the two sets of parallel horizontal lines still seek the eye level. Figs. 2 and 3 show the same principle, applied to a business block. Here the eye level is located below the middle of the block, but the principle is the same.

Draw these diagrams in large size, using colored crayon for the cubical lines, and black crayon for the lines of objects.

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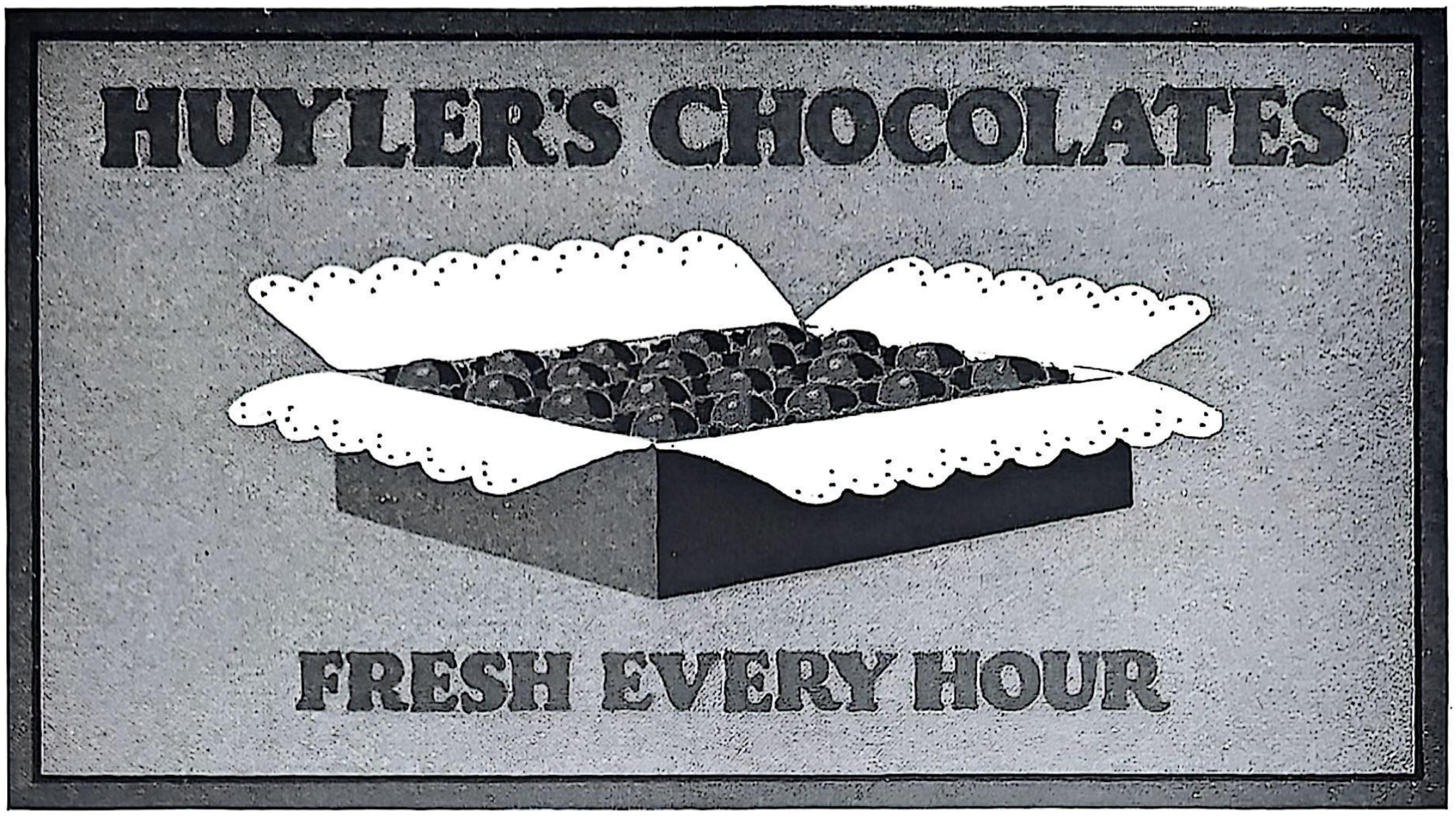

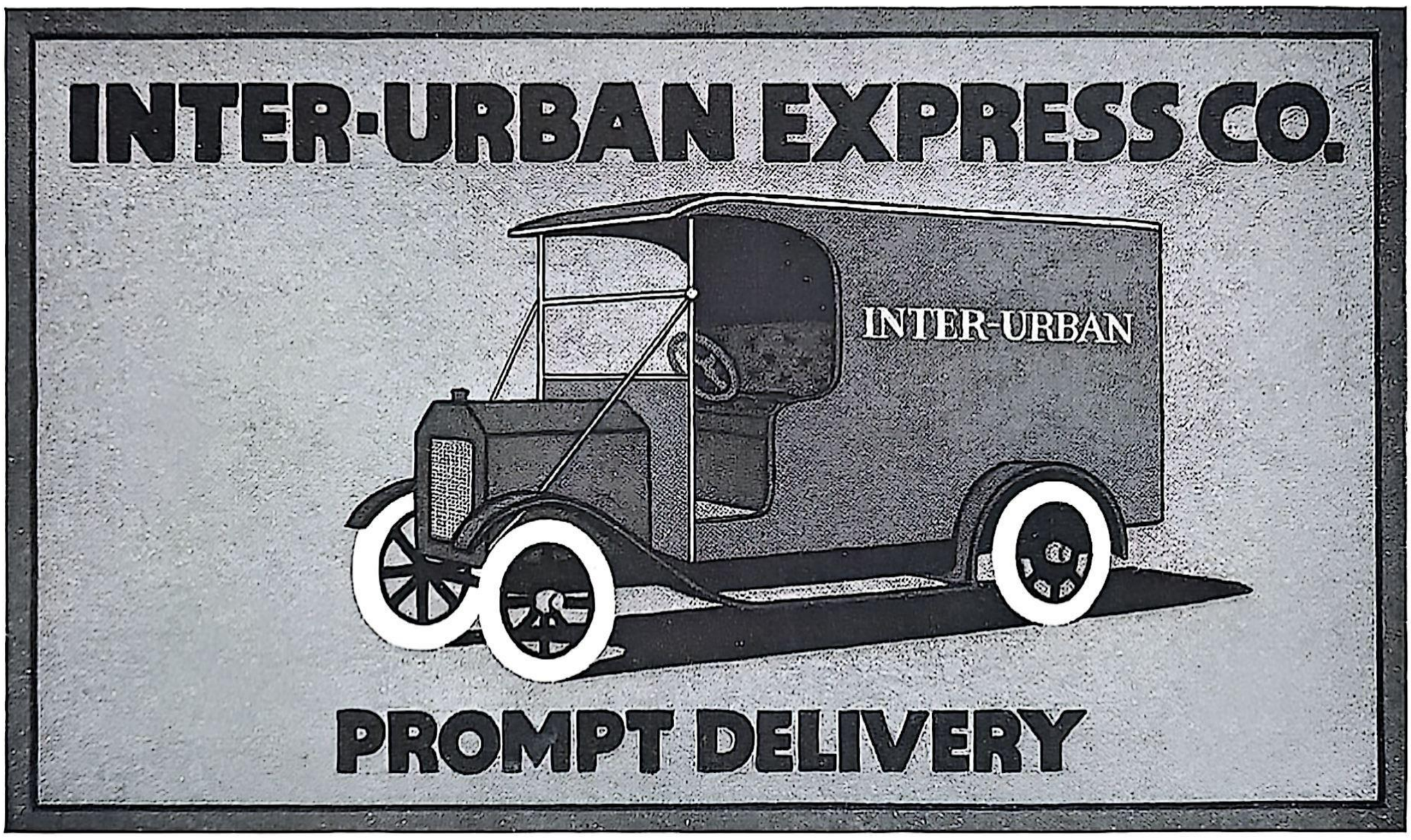

Object Drawing: Perspective Drawings Used in Commercial Design. You have only to look at street car advertisements and other posters to see how large a use is made of the perspective appearances of objects. It is best to draw the object you wish to use in correct perspective on manila paper. Cut out the shape and use it as a pattern in placing and tracing the shape in your poster. The traced shape and all letter arrangements should be filled in with opaque water colors.

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CHAPTER VIII

NATURE DRAWING

Suggestions to Teachers

New Ideals in Art: Apprehension has been expressed lest the new movement for the teaching of design and its application to materials should supplant the teaching of drawing in our public schools. To the thinking mind, there is small cause for alarm. That there have been and will continue to be radical changes in our methods of teaching art is already conceded. That these changes are based upon a change of ideals as to the aims of art teaching is also acknowledged. The large majority of people need training in ability to select and appreciate, rather than training in the representation of flowers and sunsets. The main purpose of public school training in art should be the development of intelligent appreciation as to what constitutes good form, color, texture and finish, in the selection and use of clothes, shoes, hats, houses, furniture, carpets, curtains, wall hangings, fixtures, hardware, pictures, statuary, landscape gardening, office furniture—in short of everything that goes to make up an individual's environment. What we need in an art course is not skill in representation, but the development of an understanding of the fundamental principles of taste.

Changes in Ideals Mean Changes in Methods: "New occasions teach new duties; time makes ancient good uncouth." We no longer consider that we have taught art, or even drawing, when we permit children in all grades to paint tulips and carrots, hoping for a steadily improving technique which does not come, and which would be of comparatively small importance if it did come. We no longer place emphasis on the rendering of flowers in full color values, and we do not worry if the expression of light and shade, through pencil rendering, seems to be crowded out of our art courses. We now weigh carefully the meaning and value of every exercise that we present in these courses, and we realize that we must be able to give reasons for the presence of every problem in them.

Nature Drawing in a New Light: Drawing from nature should still find a large place in our art courses, but it should be confined in the upper grades to outline drawing. Every flower and leaf that grows possesses design possibilities. The ability to detect and appreciate these possibilities is developed through much practice in outline drawing and in the analysis of plants into their various parts. In the lower grades, the children gain many of their ideas in design from cutting the various plant shapes from paper. In the upper grades, this should be supplanted largely by drawing the shapes first, even if they are cut out afterwards, to be used as patterns.

The Best Mediums for Design: Probably no other available medium for design is so satisfactory as the new opaque water colors. These bear various names, according to their manufacturers. They are known as liquid tempera colors, showcard colors, letterine and by still other names. But they are all colors that are soluble in water, and they are "tempered" with some substances that make them opaque. This enables us to use light colors on dark backgrounds. Ordinary water color brushes may be used with opaque washes, as the color easily washes out. It is necessary to provide a small brush—a No. 3 will answer—for use in outlining, and in spreading small areas of color.

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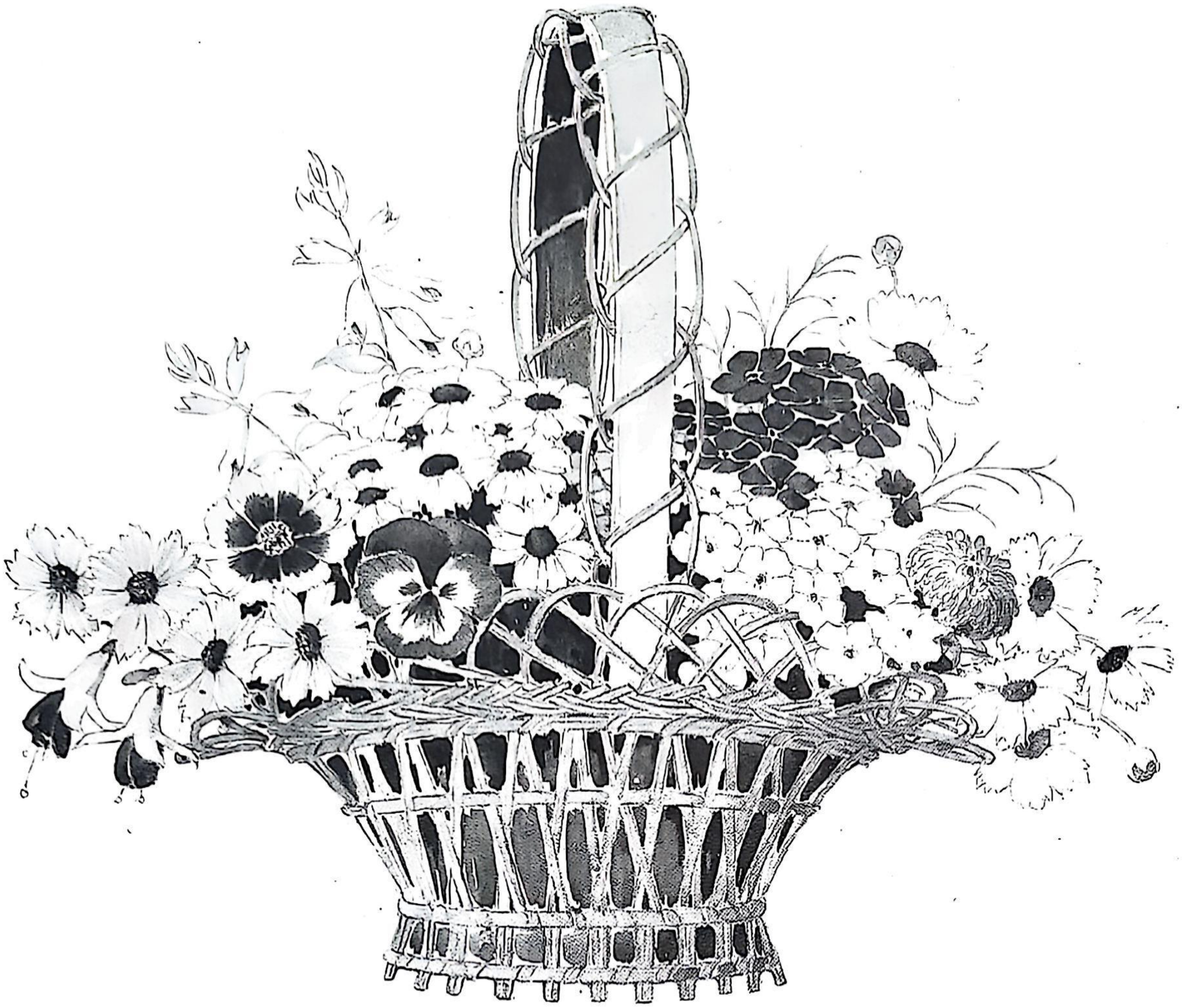

Nature Drawing: A Basket of Flowers; the Source of Many Designs. Sometimes we wish to use a basket of flowers as a decoration in itself. As a gift to a girl graduate, or as a bright color spot in a room, on a porch or in a florist's window, such an arrangement of flowers as is shown on this page is entirely appropriate. They are beautiful in themselves, and complete in their own sphere. We could not improve upon their beauty, or even approach it, if we were to try to represent them in a water color study. The flowers themselves will always be more beautiful than our imitation of them.

But a picture of a basket of flowers should not be used as a decoration. The whole effect is the opposite of flatness, and flatness is what we must secure in all designs that are intended for use on flat surfaces.

On page 71, an arrangement suggested by a basket of flowers has been cut from colored papers. This insures absolute flatness of shape. Different combinations of color have been made with each flower, and the whole number of flower, leaf and stem shapes has been harmoniously distributed in and about the basket, which is itself cut from paper. Such a design as this could be applied in any way to a surface where a flat, decorative effect was desired.

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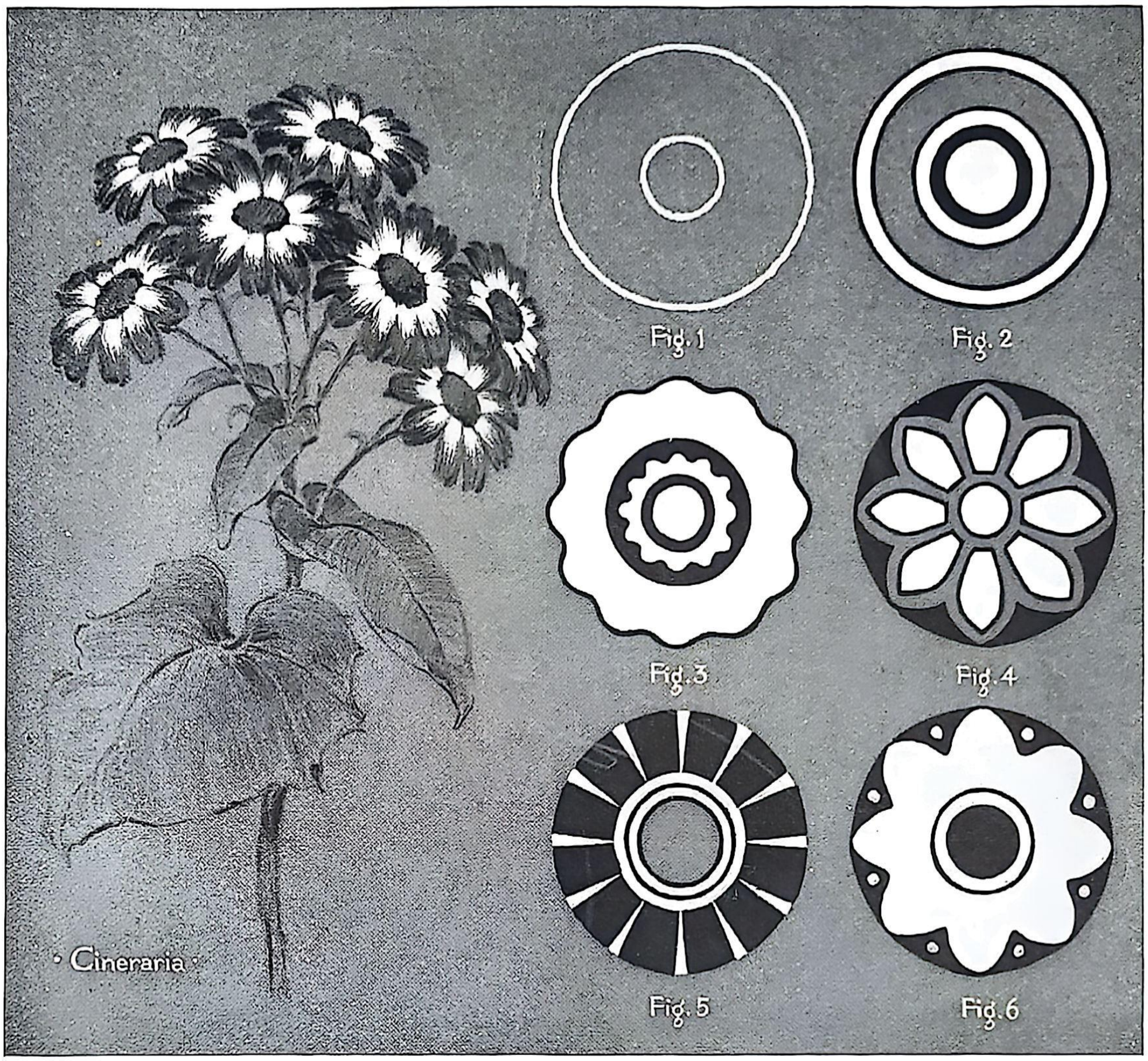

Nature Drawing: Decorative Design Units from a Circular Flower. Single flowers, like the cineraria, the calliopsis, the wild rose and the single dahlia or hollyhock are best for use in working out such designs units as are given in Figs. 1 to 6, on this page. A white pencil, a black pencil or crayon and paper of a grayed tone are interesting materials for such work, although black and white opaque water colors on a gray paper are also most effective.

Beginning with the general shape of the flower, a circle, we add an inner circle, suggested by the flower center (Fig. 1). Making this inner circle a shape of white, and adding heavy marginal bands of white and black, gives us the unit shown in Fig. 2. Starting again with a circle, we use a wave line for the outer margin, and add a filling of white, then a black center. On this we place another wave line, and then a white center with a black band (Fig. 3). In Fig. 4, an arrangement suggested by the growth of petals has been worked out. You see how the imagination may play, in the invention of all these arrangements, within a circle. In each unit there is a fine balance of light and dark values. From any single, circular flower, work out a number of design units of your own. Use black and white in each arrangement.

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Nature Drawing: A Bell Shaped Flower as a Source of Design. Bell shaped flowers, such as the campanula, the larkspur, the lily-of-the-valley or the trumpet flower, afford interesting suggestions for design. The Canterbury bell, illustrated on this page, was the basis for the various design units shown. Black and white opaque water colors and gray paper were the mediums used. First a paper bell shape was cut from a pattern, and several different tracings made from this. Five different units were developed from these tracings. It is safe to work first for a good balance of black and white, for such an arrangement is sure to be satisfactory, when color is added. For example, in the second, third, fourth and fifth units above, the gray parts in each might have been emerald green, ultramarine blue, orange or violet. In the sixth unit, the vertical lines (black) might have been of some intense color.

The last two units show how proportions may be changed, in adapting a unit to fill a certain space.

From a bell shaped flower, work out several designs of your own. Secure first a balance of black and white. Then add a note of intense color to each unit.

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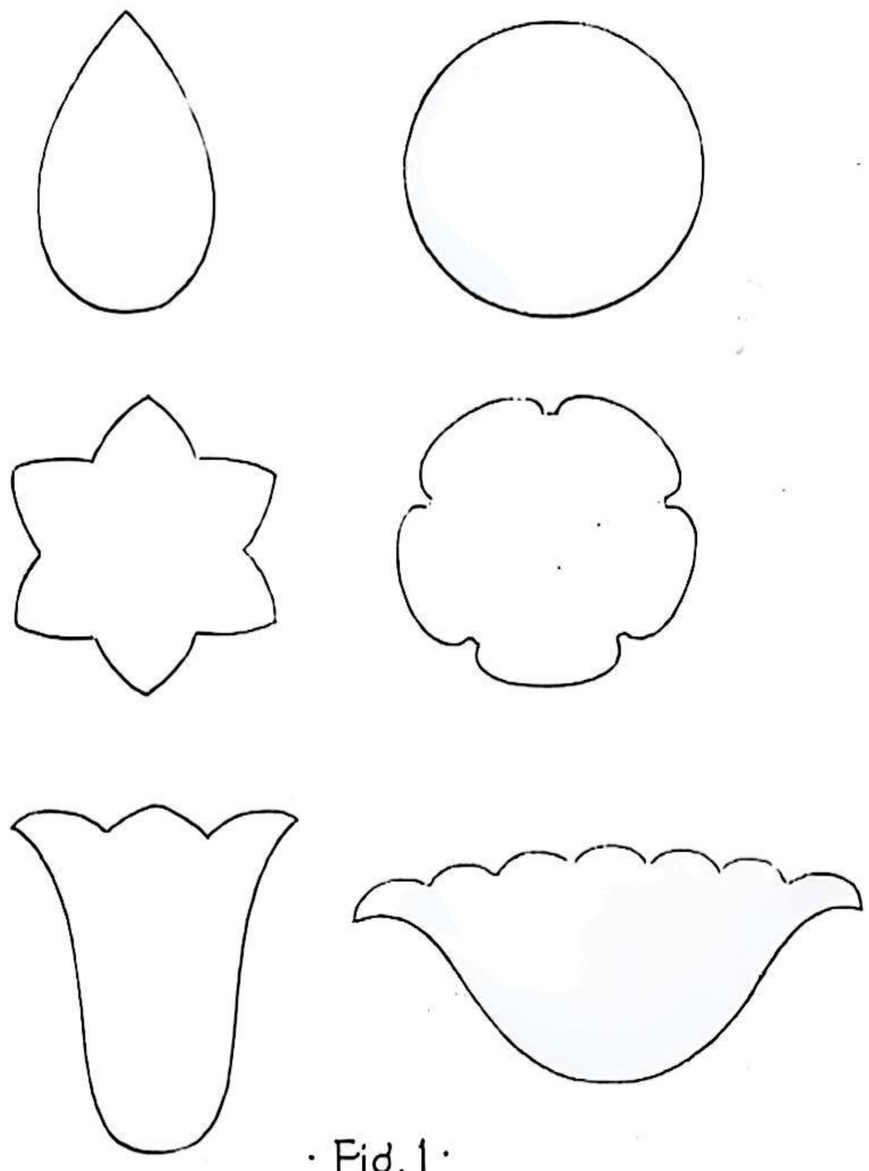

· Fig. 1 ·
Paper Shapes as Design Motives

· Fig. 2 ·
Paper Shapes Traced and Modified to Form Circular Border

· Fig. 3 · A Painted Wooden Bowl Decorated with a Circular Border

Nature Drawing: The Use of Flower Shapes in Decorating a Nut Bowl. A wooden chopping bowl, commonly sold for ten cents, was the basis for the problem illustrated on this page. The inside of the bowl was first given two coats of yellow-green enamel. After this the outside was painted with ultra-marine blue enamel. A decorative band, or border, was planned on paper first, in order that a fine arrangement of flower shapes might be secured. These shapes were traced, and various modifications made upon them, as suggested on pages 67 and 68. A similar band was then drawn upon the inside of the bowl. Paper shapes were then arranged and traced within the band, on the inside of the bowl. Then the different shapes and the background were painted with enamel paints, in the color scheme indicated.

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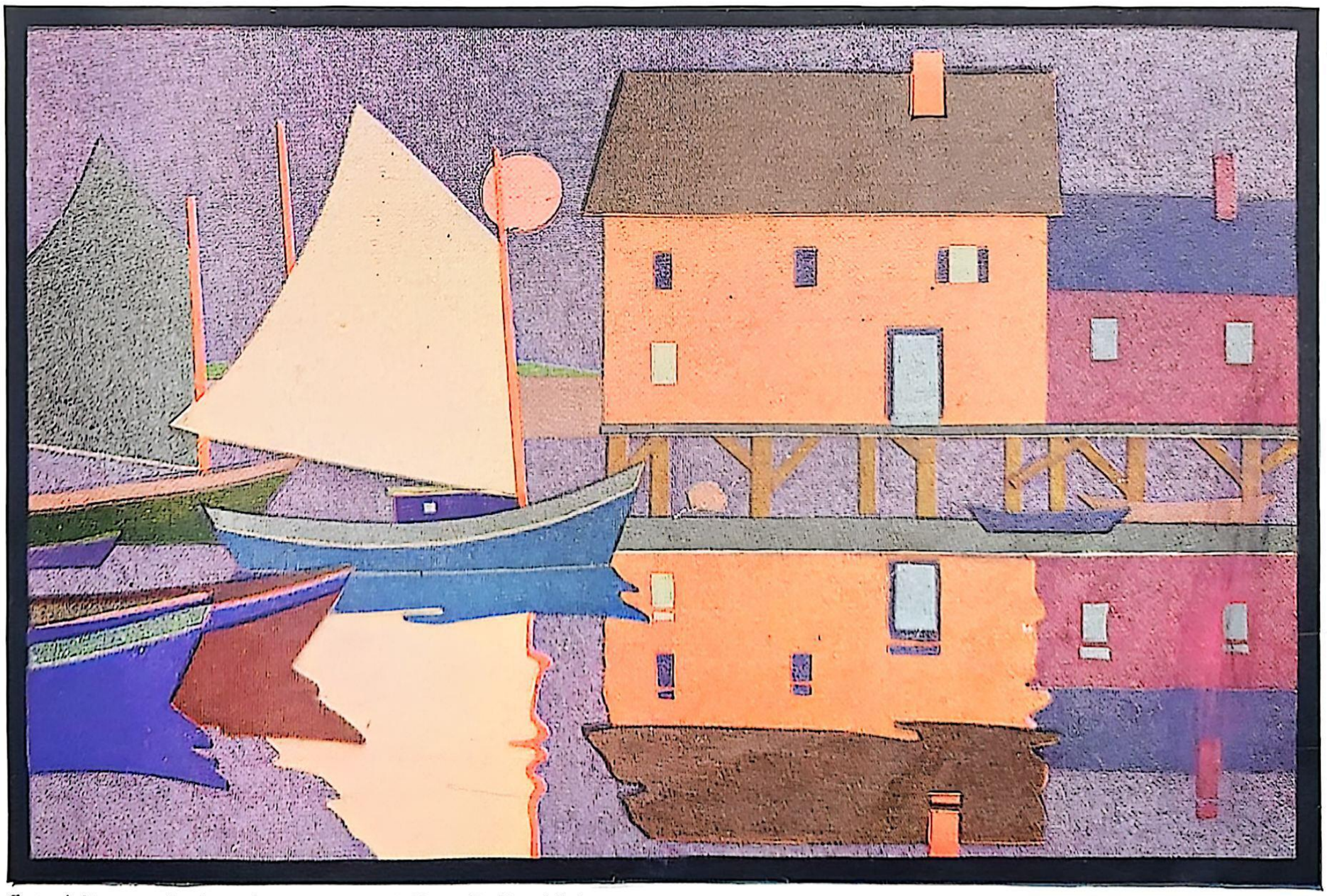
Poster Design for the Sale of Costumes

From the pupil's of Caroline Sheldon, South Side High School, Newark, N. J.

·Fig.1· Flower Basket Expressed in Cut Paper Shapes



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·Fig.2· Landscape Expressed in Cut Paper Shapes

COLOR PLATES III AND IV

THE DECORATIVE USE OF COLOR SHAPES

Seeing and Remembering: What do you remember best? Things that you have touched, tasted, smelled, heard or seen? Probably you will agree that what you see makes a quicker, a deeper and therefore a more lasting impression on your mind. Psychologists tell us that this is true; we remember longer what we see than what we hear, smell, taste or touch. This is the reason that posters are so successful as a means of advertising. A picture on a poster sinks into the mind more quickly than anything else. The eye first catches the flash of color, is attracted to read the short, crisp text, and so the idea goes home. The work of the poster is accomplished.

A Poster to Advertise Gowns: The poster on page 70 is planned to advertise a special sale of gowns. The figure is graceful, the attitude is striking. The gown displayed may not represent the actual style or pattern of the garments which are to be sold, but it is a good design, in a beautiful arrangement of colors. It is a symbol, rather than a representation, of the artistic and up-to-date character of the class of goods which the merchant wishes to feature.

The figure in this poster was traced from a fashion plate, as described on pages 30 to 33. The gown itself was designed. That is, the outline of the traced figure was modified to express the idea of the young girl with the skipping rope, in the simple summer costume. In general, the color scheme is a complementary harmony of blue and orange, relieved by the bright spots of color in the trimming. The text, or lettering, of the poster is expressed in light blue, with an outline of dark blue to give it character.

A Basket of Flowers Decoratively Treated: How different is the treatment of the flower basket on page 71 from the realistic drawing on page 66! Both are beautiful and both are interesting, but in wholly different ways. On page 66 we see a faithful imitation of nature, and an attempt to reproduce the values, shapes and characteristics of actual growth, together with the effect of light and shade. If we could see this drawing in color, we would observe as close an imitation of nature as it is possible to secure. Such realistic treatment is not suited to the purposes of decoration.

The arrangement on page 71 is pure design. It is not in imitation of nature, but it was suggested by nature. Such an arrangement implies knowledge of composition and of color harmonies. It is one of the many examples given in these books to illustrate the exercises which are necessary to the mind that would develop artistic judgment. Such a decoration might be used in a variety of ways: in a painted poster, in needlework appliqué, or in cross-stitch embroidery.

A Decorative Landscape in Cut Paper Shapes: To the designer's mill, everything is grist. He overlooks nothing. He uses flower shapes, animal shapes, geometric shapes, the human figure, shapes from landscapes—any and all shapes—to fit his needs. With him, designing is a juggling of shapes and colors. He pushes them about until his judgment says "*Now* I have a fine arrangement."

The shapes seen in a moonlight night on a river have suggested the arrangement on the lower part of page 71. The effect has been carried out with cut paper shapes. The color scheme is a double complement of blue and orange, yellow and violet.

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INDUSTRIAL ART MATERIALS

A Check List of Dependable Materials for All Grades

Water Color Boxes
- Box No. 1 ..... $0.20
- Box No. 2 ..... .20
- Box No. 3A ..... .25
- Box No. 5 ..... .25
- Box No. 8 ..... .25
- Box No. 16 ..... .75
- Box No. 12 ..... 1.75

Refills
- For Boxes 1 and 3A, doz. cakes .. .36
- For Box No. 2, per doz. cakes ..... .36
- For Boxes 8 and 16, doz. half pans .36
- For Box No. 5, doz. whole pans .. .48
- For Box No. 12, Moist Water Colors 29 colors, per tube ..... .10

Brushes

Water Color:
- No. 6, per doz ..... .60
- No. 7, " ..... .70
- No. 8, " ..... .80
- No. 10, " 1.40
- Double-End, per doz 1.40

Stencil:
- No. 5, per doz 1.00
- No. 7, " 1.20
- Red Head, per doz 2.40

"Peco" Water Color Powder
- In 5 colors, per carton ..... .05

Stencil Knives
- Per dozen 1.80
- Scissors, round, per doz 1.20
- " sharp " " 1.80

Stick Printing Dyes
- Per box, 6 sticks and 3 colors ..... .10

Stick Printing Supplies
- No. 1—½ in. square ..... per 100 .50
- No. 2—½ in. right triangle " .50
- No. 3—½ in. round ..... " .50
- No. 4—⅛x⅝ in. round .... " .50
- No. 5—$\frac{3}{16}$ in. square ..... " .17
- No. 6—$\frac{3}{16}$ in. round ..... " .15
- No. 7—$\frac{5}{16}$ in. square ..... " .30
- No. 8—$\frac{5}{16}$ in. right triangle " .30
- No. 9—$\frac{6}{16}$ in. round ..... " .30
- No. 10—$\frac{8}{16}$x½ in ..... " .40
- No. 11—$\frac{3}{16}$x$\frac{8}{16}$ in ..... " .25
- No. 12—$\frac{1}{16}$x$\frac{5}{16}$ in ..... " .40
- No. 13—Oval ..... " .60
- No. 14—Oblique triangle ... " .50
- No. 15—⅝ in. square ..... " .60
- No. 16—⅝ in. round ..... " .60
- Set A, 400 sticks 50 each, Nos. 1, 2, 3, 4 and 100 each, Nos. 5 and 6 . 1.30
- Set B, 400 sticks, 50 each, Nos. 7, 8, 9, 10, 11, 12, 13 and 14 ..... 1.50
- Saturated Pads, per pkg. of 50 ..... .20
- Plain Pads:
  - Per doz ..... .03
  - Per gross ..... .25
- Liquid Dye:
  - 2-oz. bottle ..... .25
  - ½ pint ..... .75
- Filled Color Caps:
  - Per doz ..... .15
  - Per gross 1.25
- Empty Color Caps:
  - Per doz ..... .10
  - Per gross 1.00

Enamelac
- In 15 colors, 2½-oz. cans ....., .20
- Brush ..... .10

Tempera Colors
- Box No. 1 ..... .60
- Box alone ..... .25
- Box No. 2 ..... 2.00
- Box alone ..... .75
- Single tubes ..... .10

"Liquid Tempera" Colors
- In 12 colors, per bottle ..... .20

Abbott's Show Card Colors
- In 12 colors, per bottle $0.15

"Temperine"
- Individual size, per bottle ..... .10
- Class size, per bottle ..... .25

Colored Drawing and Const. Papers
- 6x9, 50 sheets (1 color), per pkg ... .13
- 9x12, 50 sheets (1 color), per pkg .. .25
- 12x18, 50 sheets (1 color), per pkg. .50
- 24x36, per sheet ..... .03
- Assorted package, 50 sheets (10 colors) ..... .30

Tone "A"—100% additional
Tone G. I. O. P. U.—40% "

Velvet Lining Papers
- 12x18, 20 colors, per sheet ..... .20
- 36x41, 20 " " " 1.00

Black Cross Section Paper
- 6x9, 50 sheets ..... .40
- 9x12, 50 sheets ..... .75
- 24x36, per sheet ..... .10

Prang Designing Pencil
- Per dozen 1.20

Mounting Board
- 22x28, per dozen sheets 1.00

Adhesives

Stixit Paste
- 4-oz. collapsible tube ..... .10
- ¼-pt. tin can ..... .15
- ½-pt. " " ..... .25
- 1-pt. " " ..... .40
- 1-qt. " " ..... .75
- 1-gallon tin can 2.00

Liquid Glue:
- ¼-pt. tin can ..... .35
- ½-pt. " " ..... .45
- 1-pt. " " ..... .80
- 1-qt. " " 1.35
- 1-gallon tin can 4.85

Prang Library Paste:
- 2-oz. jar ..... .05
- 4-oz. jar ..... .10
- 8-oz. jar ..... .20
- 16-oz. jar ..... .35
- 32-oz. jar ..... .60
- 1-gallon jar 2.00

Prang Paste Powder:
- Small package ..... .10
- 1-lb. package ..... .25

Prang Wooden Boxes
- Nest of 5 boxes ..... .75

Prang Weaving Papers
- Per book 20 assorted colors ..... .25

Colored Crayons
- Holder Crayons No. 22—Per box 8 crayons ..... .20
- Grayed Crayons No. 50—Per box 11 crayons ..... .20
- Hexagraph Crayons No. 11—Per box 8 crayons ..... .08
- Sepia Crayons No. 8—Per box 8 crayons ..... .08

Art Education Crayons
- Box No. 1—Per box ..... .08
- " No. 1— " gross sticks 1.50
- " No. 2— " box ..... .15
- " No. 2— " gross sticks 3.00

Rembrandt Crayons
- No. 333—Per box ..... .15
- Per gross sticks 1.40
- No. 222—Per box ..... .20
- Per gross sticks 3.00
- No. 77—Per box ..... .20
- Per gross sticks 3.00

Crayonex
- Box No. 36—6 colors, per box $0.05
- " No. 3—8 colors, per box ..... .08
- 8 sticks, 1 color, per box ..... .05
- Per gross sticks 1.40
- " No. 4—16 colors, per box .... .15
- " No. 5—Per box ..... .15
- " No. 6—Per box ..... .08

Pastellex
- Box No. 7—8 crayons to box ..... .08
- " No. 21—21 " " " .... .20

"Ruco" Printing Blocks
- 2½x2½ per doz ..... .40
- 2½x5 " ..... .75

Type-High "Ruco" Blocks

Send for Sizes and Prices.

Arts and Crafts, Tape
- Natural linen, per spool, 100 yds .. 2.00

Hand Woven Russian Crash
- Per yard, 14 in. wide, net ..... .60

Stencilex
- Per yard, 36 in. wide, net ..... .25
- Packages, 25 pieces 9x12, net ..... .50

Art Linen
- Per yard ..... .60

Book Binders' Crash
- Per yard ..... .50

India Net
- Per yard ..... .60

India Floss
- ¼-lb. reel ..... .80

Raffia
- Natural color, per lb ..... .30
- Colored, per lb 1.25
- Needles, package of 25 ..... .10
- Packing needles, 5 in., each ..... .03
- Coarse Darning Needles, per pkg .. .10

Reed
- Round Reed, No. 1, fine, per lb 1.30
- Round Reed, No. 2, medium, per lb 1.20
- Round Reed, No. 3, coarse, medium, per lb 1.15
- Round Reed, No. 4, coarse, per lb. 1.15
- Round Reed, No. 5, coarser, per lb. 1.10
- Round Reed, No. 6, coarser, per lb. 1.10
- Flat Reed, ¼ in., per lb 1.10

Pine Needles (for weaving)
- ½ lb ..... .25
- 1 lb ..... .50

Craft Colors
- 1-oz. bottle with screw top ..... .10
- 2-oz. bottle with screw top ..... .15
- Special sample set, 4 colors in 1-oz. bottles ..... .50

Modelit
- 1-lb. brick ..... .40
- 5-lb. brick 1.50

Clay Flour
- 5-lb. tin pail ..... .25

Permodello
- 1-lb. cans, per can ..... .35
- 5-lb. " " 1.75
- 10-lb. " " 3.50

Permodello Waterproofing
- ½-pint cans ..... .40
- 1-pint " ..... .75

Oil Dyes
- Per tube ..... .10

Fixatif
- 2-oz. bottle ..... .15
- Pint ..... .65
- Quart 1.20

Permanent Mixture
- 1-oz. bottle ..... .15

Solder Paste
- Per tube ..... .50

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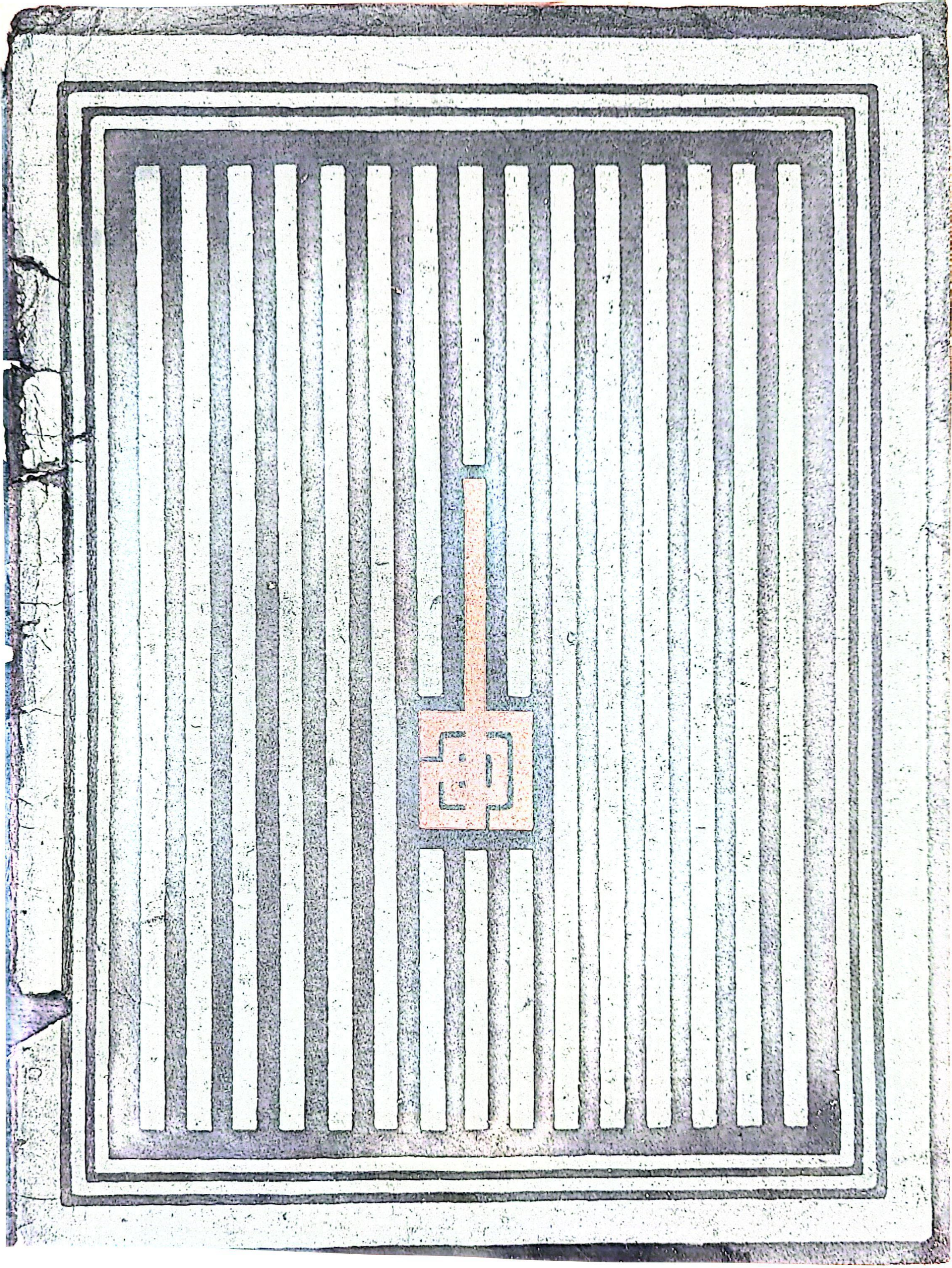
All prices are subject to change without notice

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